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Form **990-PF**Department of the Treasury
Internal Revenue Service**Return of Private Foundation**
or Section 4947(a)(1) Trust Treated as Private Foundation

OMB No 1545-0052

2014

Open to Public Inspection

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▶ Information about Form 990-PF and its separate instructions is at www.irs.gov/form990pf.

For calendar year 2014 or tax year beginning January 01, 2014, and ending December 31, 2014

Name of foundation Ichauway, Inc dba Joseph W Jones Ecological Research Center		A Employer identification number 58-1824778
Number and street (or P O box number if mail is not delivered to street address) 3988 Jones Center Drive	Room/suite	B Telephone number (see instructions) 229-734-4706
City or town, state or province, country, and ZIP or foreign postal code Newton, GA 39870		C If exemption application is pending, check here ☐
G Check all that apply: ☐ Initial return ☐ Initial return of a former public charity ☐ Final return ☐ Amended return ☐ Address change ☐ Name change		D 1. Foreign organizations, check here ☐ 2. Foreign organizations meeting the 85% test, check here and attach computation ☐
H Check type of organization: ☒ Section 501(c)(3) exempt private foundation ☐ Section 4947(a)(1) nonexempt charitable trust ☐ Other taxable private foundation		E If private foundation status was terminated under section 507(b)(1)(A), check here ☐
I Fair market value of all assets at end of year (from Part II, col. (c), line 16) ▶ \$ 15,506,615	J Accounting method: ☐ Cash ☒ Accrual ☐ Other (specify) _____	F If the foundation is in a 60-month termination under section 507(b)(1)(B), check here ☐

Part I Analysis of Revenue and Expenses (The total of amounts in columns (b), (c), and (d) may not necessarily equal the amounts in column (a) (see instructions))		(a) Revenue and expenses per books	(b) Net investment income	(c) Adjusted net income	(d) Disbursements for charitable purposes (cash basis only)
Revenue	1 Contributions, gifts, grants, etc., received (attach schedule)	19,096,037			
	2 Check ☐ if the foundation is not required to attach Sch B				
	3 Interest on savings and temporary cash investments	2,743	2,743	2,743	
	4 Dividends and interest from securities	0	0	0	
	5a Gross rents	0	0	0	
	b Net rental income or (loss)	0			
	6a Net gain or (loss) from sale of assets not on line 10	600			
	b Gross sales price for all assets on line 6a	600			
	7 Capital gain net income (from Part IV, line 2)				
	8 Net short-term capital gain				
	9 Income modifications				
	10a Gross sales less returns and allowances	0			
b Less: Cost of goods sold	0				
c Gross profit or (loss) (attach schedule)	0		0		
11 Other income (attach schedule)	235,725	0	0		
12 Total. Add lines 1 through 11	19,335,105	2,743	2,743		
Operating and Administrative Expenses	13 Compensation of officers, directors, trustees, etc.	0	0	0	0
	14 Other employee salaries and wages	4,384,482	3,487	3,487	4,352,937
	15 Pension plans, employee benefits	1,948,411	1,577	1,577	1,942,224
	16a Legal fees (attach schedule)	3,902	0	0	3,902
	b Accounting fees (attach schedule)	31,800	0	0	31,800
	c Other professional fees (attach schedule)	122,129	483	483	105,706
	17 Interest	0	0	0	0
	18 Taxes (attach schedule) (see instructions)	157,010	0	0	158,203
	19 Depreciation (attach schedule) and depletion	618,678	0	0	
	20 Occupancy	347,696	0	0	348,783
	21 Travel, conferences, and meetings	165,967	0	0	167,515
	22 Printing and publications	7,878	0	0	7,358
	23 Other expenses (attach schedule)	1,828,439	0	0	1,826,627
	24 Total operating and administrative expenses. Add lines 13 through 23	9,616,392	5,547	5,547	8,945,055
	25 Contributions, gifts, grants paid	102,250			109,240
26 Total expenses and disbursements. Add lines 24 and 25	9,718,642	5,547	5,547	9,054,295	
27 Subtract line 26 from line 12:					
a Excess of revenue over expenses and disbursements	9,616,463				
b Net investment income (if negative, enter -0-)		0			
c Adjusted net income (if negative, enter -0-)			0		

For Paperwork Reduction Act Notice, see instructions.

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Part II Balance Sheets		Attached schedules and amounts in the description column should be for end-of-year amounts only (See instructions)	Beginning of year	End of year	
			(a) Book Value	(b) Book Value	(c) Fair Market Value
Assets	1	Cash—non-interest-bearing	74,898	51,908	51,908
	2	Savings and temporary cash investments	3,171,152	2,573,193	2,573,193
	3	Accounts receivable ▶ 1,846			
		Less: allowance for doubtful accounts ▶ 0	25	1,846	1,846
	4	Pledges receivable ▶ 0			
		Less: allowance for doubtful accounts ▶ 0	0	0	0
	5	Grants receivable	83,335	9,499,976	9,499,976
	6	Receivables due from officers, directors, trustees, and other disqualified persons (attach schedule) (see instructions)	0	0	0
	7	Other notes and loans receivable (attach schedule) ▶ 0			
		Less: allowance for doubtful accounts ▶ 0	0	0	0
	8	Inventories for sale or use	0	0	0
	9	Prepaid expenses and deferred charges	94,527	109,969	109,969
	10a	Investments—U.S. and state government obligations (attach schedule)	0	0	0
	b	Investments—corporate stock (attach schedule)	0	0	0
	c	Investments—corporate bonds (attach schedule)	0	0	0
Liabilities	11	Investments—land, buildings, and equipment: basis ▶ 0			
		Less: accumulated depreciation (attach schedule) ▶ 0	0	0	0
	12	Investments—mortgage loans	0	0	0
	13	Investments—other (attach schedule)	0	0	0
	14	Land, buildings, and equipment: basis ▶ 18,483,699			
		Less: accumulated depreciation (attach schedule) ▶ 15,213,976	2,583,188	3,269,723	3,269,723
	15	Other assets (describe ▶ N/A)	0	0	0
	16	Total assets (to be completed by all filers—see the instructions. Also, see page 1, item I)	6,007,125	15,506,615	15,506,615
	17	Accounts payable and accrued expenses	473,159	451,163	
	18	Grants payable	0	0	
Net Assets or Fund Balances	19	Deferred revenue	142,273	47,296	
	20	Loans from officers, directors, trustees, and other disqualified persons	0	0	
	21	Mortgages and other notes payable (attach schedule)	0	0	
	22	Other liabilities (describe ▶ N/A)	0	0	
	23	Total liabilities (add lines 17 through 22)	615,432	498,459	
		Foundations that follow SFAS 117, check here ▶ ☒ and complete lines 24 through 26 and lines 30 and 31.			
	24	Unrestricted	5,391,693	5,608,156	
Net Assets or Fund Balances	25	Temporarily restricted	0	9,400,000	
	26	Permanently restricted	0	0	
		Foundations that do not follow SFAS 117, check here ▶ ☐ and complete lines 27 through 31.			
	27	Capital stock, trust principal, or current funds			
	28	Paid-in or capital surplus, or land, bldg., and equipment fund			
	29	Retained earnings, accumulated income, endowment, or other funds			
	30	Total net assets or fund balances (see instructions)	5,391,693	15,008,156	
	31	Total liabilities and net assets/fund balances (see instructions)	6,007,125	15,506,615	

Part III Analysis of Changes in Net Assets or Fund Balances

1	Total net assets or fund balances at beginning of year—Part II, column (a), line 30 (must agree with end-of-year figure reported on prior year's return)	1	5,391,693
2	Enter amount from Part I, line 27a	2	9,616,463
3	Other increases not included in line 2 (itemize) ▶ N/A	3	0
4	Add lines 1, 2, and 3	4	15,008,156
5	Decreases not included in line 2 (itemize) ▶ N/A	5	0
6	Total net assets or fund balances at end of year (line 4 minus line 5)—Part II, column (b), line 30	6	15,008,156

Part IV Capital Gains and Losses for Tax on Investment Income

(a) List and describe the kind(s) of property sold (e.g., real estate, 2-story brick warehouse, or common stock, 200 shs MLC Co)		(b) How acquired P—Purchase D—Donation	(c) Date acquired (mo, day, yr)	(d) Date sold (mo, day, yr)
1a				
b				
c				
d				
e				

(e) Gross sales price	(f) Depreciation allowed (or allowable)	(g) Cost or other basis plus expense of sale	(h) Gain or (loss) (e) plus (f) minus (g)
a			
b			
c			
d			
e			

Complete only for assets showing gain in column (h) and owned by the foundation on 12/31/69

(i) FMV as of 12/31/69	(j) Adjusted basis as of 12/31/69	(k) Excess of col (i) over col (j), if any	(l) Gains (Col (h) gain minus col (k), but not less than -0-) or Losses (from col (h))
a			
b			
c			
d			
e			

2 Capital gain net income or (net capital loss) { If gain, also enter in Part I, line 7 If (loss), enter -0- in Part I, line 7 }	2	
3 Net short-term capital gain or (loss) as defined in sections 1222(5) and (6): If gain, also enter in Part I, line 8, column (c) (see instructions). If (loss), enter -0- in Part I, line 8	3	

Part V Qualification Under Section 4940(e) for Reduced Tax on Net Investment Income

(For optional use by domestic private foundations subject to the section 4940(a) tax on net investment income.)

If section 4940(d)(2) applies, leave this part blank.

Was the foundation liable for the section 4942 tax on the distributable amount of any year in the base period? ☐ Yes ☒ No
 If "Yes," the foundation does not qualify under section 4940(e). Do not complete this part.

1 Enter the appropriate amount in each column for each year; see the instructions before making any entries.

(a) Base period years Calendar year (or tax year beginning in)	(b) Adjusted qualifying distributions	(c) Net value of noncharitable-use assets	(d) Distribution ratio (col (b) divided by col (c))
2013	9,516,758	846,993	11 235935
2012	9,117,518	846,993	10 764573
2011	8,843,171	846,993	10 440666
2010	8,381,419	1,000,000	8 381419
2009	8,220,233	1,000,000	8 220233

2 Total of line 1, column (d)	2	49 042826
3 Average distribution ratio for the 5-year base period—divide the total on line 2 by 5, or by the number of years the foundation has been in existence if less than 5 years	3	9 808565
4 Enter the net value of noncharitable-use assets for 2014 from Part X, line 5	4	846,993
5 Multiply line 4 by line 3	5	8,307,786
6 Enter 1% of net investment income (1% of Part I, line 27b)	6	0
7 Add lines 5 and 6	7	8,307,786
8 Enter qualifying distributions from Part XII, line 4 If line 8 is equal to or greater than line 7, check the box in Part VI, line 1b, and complete that part using a 1% tax rate. See the Part VI instructions.	8	10,359,509

Part VI Excise Tax Based on Investment Income (Section 4940(a), 4940(b), 4940(e), or 4948—see instructions)

1a	Exempt operating foundations described in section 4940(d)(2), check here ☐ and enter "N/A" on line 1. Date of ruling or determination letter: _____ (attach copy of letter if necessary—see instructions)	1	0
b	Domestic foundations that meet the section 4940(e) requirements in Part V, check here ☒ and enter 1% of Part I, line 27b		
c	All other domestic foundations enter 2% of line 27b. Exempt foreign organizations enter 4% of Part I, line 12, col. (b).		
2	Tax under section 511 (domestic section 4947(a)(1) trusts and taxable foundations only. Others enter -0-)	2	0
3	Add lines 1 and 2	3	0
4	Subtitle A (income) tax (domestic section 4947(a)(1) trusts and taxable foundations only. Others enter -0-)	4	0
5	Tax based on investment income. Subtract line 4 from line 3. If zero or less, enter -0-	5	0
6	Credits/Payments.		
a	2014 estimated tax payments and 2013 overpayment credited to 2014	6a	0
b	Exempt foreign organizations—tax withheld at source	6b	0
c	Tax paid with application for extension of time to file (Form 8868)	6c	0
d	Backup withholding erroneously withheld	6d	0
7	Total credits and payments. Add lines 6a through 6d	7	0
8	Enter any penalty for underpayment of estimated tax. Check here ☐ if Form 2220 is attached	8	0
9	Tax due. If the total of lines 5 and 8 is more than line 7, enter amount owed	9	0
10	Overpayment. If line 7 is more than the total of lines 5 and 8, enter the amount overpaid	10	0
11	Enter the amount of line 10 to be: Credited to 2015 estimated tax ☐ Refunded ☐	11	0

Part VII-A Statements Regarding Activities

	Yes	No
1a During the tax year, did the foundation attempt to influence any national, state, or local legislation or did it participate or intervene in any political campaign?		✓
b Did it spend more than \$100 during the year (either directly or indirectly) for political purposes (see Instructions for the definition)? <i>If the answer is "Yes" to 1a or 1b, attach a detailed description of the activities and copies of any materials published or distributed by the foundation in connection with the activities.</i>		✓
c Did the foundation file Form 1120-POL for this year?		✓
d Enter the amount (if any) of tax on political expenditures (section 4955) imposed during the year: (1) On the foundation. ▶ \$ 0 (2) On foundation managers. ▶ \$ 0		
e Enter the reimbursement (if any) paid by the foundation during the year for political expenditure tax imposed on foundation managers. ▶ \$ 0		
2 Has the foundation engaged in any activities that have not previously been reported to the IRS? <i>If "Yes," attach a detailed description of the activities.</i>		✓
3 Has the foundation made any changes, not previously reported to the IRS, in its governing instrument, articles of incorporation, or bylaws, or other similar instruments? <i>If "Yes," attach a conformed copy of the changes</i>	✓	
4a Did the foundation have unrelated business gross income of \$1,000 or more during the year?		✓
b If "Yes," has it filed a tax return on Form 990-T for this year?	N/A	
5 Was there a liquidation, termination, dissolution, or substantial contraction during the year? <i>If "Yes," attach the statement required by General Instruction T.</i>		✓
6 Are the requirements of section 508(e) (relating to sections 4941 through 4945) satisfied either: • By language in the governing instrument, or • By state legislation that effectively amends the governing instrument so that no mandatory directions that conflict with the state law remain in the governing instrument?	✓	
7 Did the foundation have at least \$5,000 in assets at any time during the year? <i>If "Yes," complete Part II, col. (c), and Part XV</i>	✓	
8a Enter the states to which the foundation reports or with which it is registered (see instructions) ▶ Georgia		
b If the answer is "Yes" to line 7, has the foundation furnished a copy of Form 990-PF to the Attorney General (or designate) of each state as required by General Instruction G? <i>If "No," attach explanation</i>	✓	
9 Is the foundation claiming status as a private operating foundation within the meaning of section 4942(j)(3) or 4942(j)(5) for calendar year 2014 or the taxable year beginning in 2014 (see instructions for Part XIV)? <i>If "Yes," complete Part XIV</i>	✓	
10 Did any persons become substantial contributors during the tax year? <i>If "Yes," attach a schedule listing their names and addresses</i>		✓

Part VII-A Statements Regarding Activities (continued)

11	At any time during the year, did the foundation, directly or indirectly, own a controlled entity within the meaning of section 512(b)(13)? If "Yes," attach schedule (see instructions)	11		✓
12	Did the foundation make a distribution to a donor advised fund over which the foundation or a disqualified person had advisory privileges? If "Yes," attach statement (see instructions)	12		✓
13	Did the foundation comply with the public inspection requirements for its annual returns and exemption application? Website address ► <u>www.jonesctr.org</u>	13	✓	
14	The books are in care of ► <u>Erik S Johnson - Secretary/Treasurer</u> Telephone no. ► <u>404-522-6755</u> Located at ► <u>191 Peachtree Street, NE Suite 3540, Atlanta, GA</u> ZIP+4 ► <u>30303</u>			
15	Section 4947(a)(1) nonexempt charitable trusts filing Form 990-PF in lieu of Form 1041 —Check here, and enter the amount of tax-exempt interest received or accrued during the year	15		N/A
16	At any time during calendar year 2014, did the foundation have an interest in or a signature or other authority over a bank, securities, or other financial account in a foreign country? See the instructions for exceptions and filing requirements for FinCEN Form 114, (formerly TD F 90-22.1). If "Yes," enter the name of the foreign country ►	16	Yes	No
				✓

Part VII-B Statements Regarding Activities for Which Form 4720 May Be Required

File Form 4720 if any item is checked in the "Yes" column, unless an exception applies.		Yes	No
1a	During the year did the foundation (either directly or indirectly):		
(1)	Engage in the sale or exchange, or leasing of property with a disqualified person? ☐ Yes ☒ No		
(2)	Borrow money from, lend money to, or otherwise extend credit to (or accept it from) a disqualified person? ☐ Yes ☒ No		
(3)	Furnish goods, services, or facilities to (or accept them from) a disqualified person? ☒ Yes ☐ No		
(4)	Pay compensation to, or pay or reimburse the expenses of, a disqualified person? ☒ Yes ☐ No		
(5)	Transfer any income or assets to a disqualified person (or make any of either available for the benefit or use of a disqualified person)? ☐ Yes ☒ No		
(6)	Agree to pay money or property to a government official? (Exception. Check "No" if the foundation agreed to make a grant to or to employ the official for a period after termination of government service, if terminating within 90 days.) ☐ Yes ☒ No		
b	If any answer is "Yes" to 1a(1)–(6), did any of the acts fail to qualify under the exceptions described in Regulations section 53.4941(d)-3 or in a current notice regarding disaster assistance (see instructions)?	1b	✓
	Organizations relying on a current notice regarding disaster assistance check here ☐		
c	Did the foundation engage in a prior year in any of the acts described in 1a, other than excepted acts, that were not corrected before the first day of the tax year beginning in 2014?	1c	✓
2	Taxes on failure to distribute income (section 4942) (does not apply for years the foundation was a private operating foundation defined in section 4942(j)(3) or 4942(j)(5)):		
a	At the end of tax year 2014, did the foundation have any undistributed income (lines 6d and 6e, Part XIII) for tax year(s) beginning before 2014? ☐ Yes ☒ No If "Yes," list the years ► 20____, 20____, 20____, 20____		
b	Are there any years listed in 2a for which the foundation is not applying the provisions of section 4942(a)(2) (relating to incorrect valuation of assets) to the year's undistributed income? (If applying section 4942(a)(2) to all years listed, answer "No" and attach statement—see instructions.)	2b	N/A
c	If the provisions of section 4942(a)(2) are being applied to any of the years listed in 2a, list the years here. ► 20____, 20____, 20____, 20____		
3a	Did the foundation hold more than a 2% direct or indirect interest in any business enterprise at any time during the year? ☐ Yes ☒ No		
b	If "Yes," did it have excess business holdings in 2014 as a result of (1) any purchase by the foundation or disqualified persons after May 26, 1969; (2) the lapse of the 5-year period (or longer period approved by the Commissioner under section 4943(c)(7)) to dispose of holdings acquired by gift or bequest; or (3) the lapse of the 10-, 15-, or 20-year first phase holding period? (<i>Use Schedule C, Form 4720, to determine if the foundation had excess business holdings in 2014.</i>)	3b	N/A
4a	Did the foundation invest during the year any amount in a manner that would jeopardize its charitable purposes?	4a	✓
b	Did the foundation make any investment in a prior year (but after December 31, 1969) that could jeopardize its charitable purpose that had not been removed from jeopardy before the first day of the tax year beginning in 2014?	4b	✓

Part VII-B Statements Regarding Activities for Which Form 4720 May Be Required (continued)**5a** During the year did the foundation pay or incur any amount to:(1) Carry on propaganda, or otherwise attempt to influence legislation (section 4945(e))? ☐ Yes ☒ No(2) Influence the outcome of any specific public election (see section 4955); or to carry on, directly or indirectly, any voter registration drive? ☐ Yes ☒ No(3) Provide a grant to an individual for travel, study, or other similar purposes? ☐ Yes ☒ No(4) Provide a grant to an organization other than a charitable, etc., organization described in section 4945(d)(4)(A)? (see instructions) ☐ Yes ☒ No(5) Provide for any purpose other than religious, charitable, scientific, literary, or educational purposes, or for the prevention of cruelty to children or animals? ☐ Yes ☒ No**b** If any answer is "Yes" to 5a(1)–(5), did **any** of the transactions fail to qualify under the exceptions described in Regulations section 53.4945 or in a current notice regarding disaster assistance (see instructions)? ☐ Yes ☒ NoOrganizations relying on a current notice regarding disaster assistance check here ☐**c** If the answer is "Yes" to question 5a(4), does the foundation claim exemption from the tax because it maintained expenditure responsibility for the grant? ☐ Yes ☐ No

If "Yes," attach the statement required by Regulations section 53.4945–5(d).

6a Did the foundation, during the year, receive any funds, directly or indirectly, to pay premiums on a personal benefit contract? ☐ Yes ☒ No**b** Did the foundation, during the year, pay premiums, directly or indirectly, on a personal benefit contract? ☐ Yes ☒ No

If "Yes" to 6b, file Form 8870.

7a At any time during the tax year, was the foundation a party to a prohibited tax shelter transaction? ☐ Yes ☒ No**b** If "Yes," did the foundation receive any proceeds or have any net income attributable to the transaction? ☐ Yes ☒ No**Part VIII Information About Officers, Directors, Trustees, Foundation Managers, Highly Paid Employees, and Contractors****1** List all officers, directors, trustees, foundation managers and their compensation (see instructions).

(a) Name and address	(b) Title, and average hours per week devoted to position	(c) Compensation (if not paid, enter -0-)	(d) Contributions to employee benefit plans and deferred compensation	(e) Expense account, other allowances
See attached statement				

2 Compensation of five highest-paid employees (other than those included on line 1—see instructions). If none, enter "NONE."

(a) Name and address of each employee paid more than \$50,000	(b) Title, and average hours per week devoted to position	(c) Compensation	(d) Contributions to employee benefit plans and deferred compensation	(e) Expense account, other allowances
Lindsay R Boring 3988 Jones Center Drive Newton, GA 39870	Director 40 00	205,000	27,381	9,600
Paul V McCormick 3988 Jones Center Drive Newton, GA 39870	Scientist 40 00	128,593	20,673	0
James B Atkinson 3988 Jones Center Drive Newton, GA 39870	Nat Res Manager 40 00	127,859	27,520	0
L Kay Kirkman 3988 Jones Center Drive Newton, GA 39870	Scientist 40 00	122,901	20,171	0
Becky H Gay 3988 Jones Center Drive Newton, GA 39870	Bus Administrator 40 00	121,105	35,140	0
Total number of other employees paid over \$50,000				22

Part VIII Information About Officers, Directors, Trustees, Foundation Managers, Highly Paid Employees, and Contractors (continued)**3 Five highest-paid independent contractors for professional services (see instructions). If none, enter "NONE."**

(a) Name and address of each person paid more than \$50,000	(b) Type of service	(c) Compensation
None		
Total number of others receiving over \$50,000 for professional services		

Part IX-A Summary of Direct Charitable Activities

List the foundation's four largest direct charitable activities during the tax year. Include relevant statistical information such as the number of organizations and other beneficiaries served, conferences convened, research papers produced, etc.	Expenses
1 Substantially all of the foundation's resources are devoted to the environmental research, education, and conservation programs of the Joseph W. Jones Ecological Research Center	9,054,295
2 See attached report from the Director	0
3	0
4	0

Part IX-B Summary of Program-Related Investments (see instructions)

Describe the two largest program-related investments made by the foundation during the tax year on lines 1 and 2	Amount
1 None	0
2	0
All other program-related investments. See instructions.	0
3	0
Total. Add lines 1 through 3	0

Part X Minimum Investment Return (All domestic foundations must complete this part. Foreign foundations, see instructions.)

1	Fair market value of assets not used (or held for use) directly in carrying out charitable, etc., purposes:		
a	Average monthly fair market value of securities	1a	0
b	Average of monthly cash balances	1b	2,762,175
c	Fair market value of all other assets (see instructions)	1c	0
d	Total (add lines 1a, b, and c)	1d	2,762,175
e	Reduction claimed for blockage or other factors reported on lines 1a and 1c (attach detailed explanation)	1e	0
2	Acquisition indebtedness applicable to line 1 assets	2	0
3	Subtract line 2 from line 1d	3	2,762,175
4	Cash deemed held for charitable activities. Enter 1 1/2 % of line 3 (for greater amount, see instructions)	4	1,915,182
5	Net value of noncharitable-use assets. Subtract line 4 from line 3. Enter here and on Part V, line 4	5	846,993
6	Minimum investment return. Enter 5% of line 5	6	42,350

Part XI Distributable Amount (see instructions) (Section 4942(j)(3) and (j)(5) private operating foundations and certain foreign organizations check here ☒ and do not complete this part.)

1	Minimum investment return from Part X, line 6	1	
2a	Tax on investment income for 2014 from Part VI, line 5	2a	
b	Income tax for 2014. (This does not include the tax from Part VI.)	2b	
c	Add lines 2a and 2b	2c	
3	Distributable amount before adjustments. Subtract line 2c from line 1	3	
4	Recoveries of amounts treated as qualifying distributions	4	
5	Add lines 3 and 4	5	
6	Deduction from distributable amount (see instructions)	6	
7	Distributable amount as adjusted. Subtract line 6 from line 5. Enter here and on Part XIII, line 1	7	

Part XII Qualifying Distributions (see instructions)

1	Amounts paid (including administrative expenses) to accomplish charitable, etc., purposes:		
a	Expenses, contributions, gifts, etc.—total from Part I, column (d), line 26	1a	9,054,295
b	Program-related investments—total from Part IX-B	1b	0
2	Amounts paid to acquire assets used (or held for use) directly in carrying out charitable, etc., purposes	2	1,305,214
3	Amounts set aside for specific charitable projects that satisfy the:		
a	Suitability test (prior IRS approval required)	3a	0
b	Cash distribution test (attach the required schedule)	3b	0
4	Qualifying distributions. Add lines 1a through 3b. Enter here and on Part V, line 8, and Part XIII, line 4	4	10,359,509
5	Foundations that qualify under section 4940(e) for the reduced rate of tax on net investment income. Enter 1% of Part I, line 27b (see instructions)	5	0
6	Adjusted qualifying distributions. Subtract line 5 from line 4	6	10,359,509

Note. The amount on line 6 will be used in Part V, column (b), in subsequent years when calculating whether the foundation qualifies for the section 4940(e) reduction of tax in those years.

Part XIII Undistributed Income (see instructions)

	(a) Corpus	(b) Years prior to 2013	(c) 2013	(d) 2014
1 Distributable amount for 2014 from Part XI, line 7				0
2 Undistributed income, if any, as of the end of 2014				
a Enter amount for 2013 only			0	
b Total for prior years: 20____, 20____, 20____		0		
3 Excess distributions carryover, if any, to 2014:				
a From 2009 None				
b From 2010 None				
c From 2011 None				
d From 2012 None				
e From 2013 None				
f Total of lines 3a through e	0			
4 Qualifying distributions for 2014 from Part XII, line 4: ► \$_____				
a Applied to 2013, but not more than line 2a			0	
b Applied to undistributed income of prior years (Election required—see instructions)		0		
c Treated as distributions out of corpus (Election required—see instructions)	0			
d Applied to 2014 distributable amount				0
e Remaining amount distributed out of corpus	0			
5 Excess distributions carryover applied to 2014 (If an amount appears in column (d), the same amount must be shown in column (a).)	0			0
6 Enter the net total of each column as indicated below:				
a Corpus. Add lines 3f, 4c, and 4e. Subtract line 5	0			
b Prior years' undistributed income. Subtract line 4b from line 2b		0		
c Enter the amount of prior years' undistributed income for which a notice of deficiency has been issued, or on which the section 4942(a) tax has been previously assessed		0		
d Subtract line 6c from line 6b. Taxable amount—see instructions		0		
e Undistributed income for 2013. Subtract line 4a from line 2a. Taxable amount—see instructions			0	
f Undistributed income for 2014. Subtract lines 4d and 5 from line 1. This amount must be distributed in 2015				0
7 Amounts treated as distributions out of corpus to satisfy requirements imposed by section 170(b)(1)(F) or 4942(g)(3) (Election may be required—see instructions)	0			
8 Excess distributions carryover from 2009 not applied on line 5 or line 7 (see instructions)	0			
9 Excess distributions carryover to 2015. Subtract lines 7 and 8 from line 6a	0			
10 Analysis of line 9:				
a Excess from 2010	0			
b Excess from 2011	0			
c Excess from 2012	0			
d Excess from 2013	0			
e Excess from 2014	0			

Part XIV Private Operating Foundations (see instructions and Part VII-A, question 9)

- 1a** If the foundation has received a ruling or determination letter that it is a private operating foundation, and the ruling is effective for 2014, enter the date of the ruling July 25, 1989
- b** Check box to indicate whether the foundation is a private operating foundation described in section ☒ 4942(j)(3) or ☐ 4942(j)(5)

	Tax year				(e) Total
	(a) 2014	(b) 2013	(c) 2012	(d) 2011	
2a Enter the lesser of the adjusted net income from Part I or the minimum investment return from Part X for each year listed	0	0	0	0	0
b 85% of line 2a	0	0	0	0	0
c Qualifying distributions from Part XII, line 4 for each year listed	10,359,509	9,516,758	9,117,518	8,843,171	37,836,956
d Amounts included in line 2c not used directly for active conduct of exempt activities	0	0	0	0	0
e Qualifying distributions made directly for active conduct of exempt activities. Subtract line 2d from line 2c	10,359,509	9,516,758	9,117,518	8,843,171	37,836,956
3 Complete 3a, b, or c for the alternative test relied upon:					
a "Assets" alternative test—enter:					
(1) Value of all assets					0
(2) Value of assets qualifying under section 4942(j)(3)(B)(i)					0
b "Endowment" alternative test—enter ² / ₃ of minimum investment return shown in Part X, line 6 for each year listed	28,233	28,233	28,233	33,333	118,032
c "Support" alternative test—enter:					
(1) Total support other than gross investment income (interest, dividends, rents, payments on securities loans (section 512(a)(5)), or royalties)					0
(2) Support from general public and 5 or more exempt organizations as provided in section 4942(j)(3)(B)(iii)					0
(3) Largest amount of support from an exempt organization					0
(4) Gross investment income					0

Part XV Supplementary Information (Complete this part only if the foundation had \$5,000 or more in assets at any time during the year—see instructions.)**1 Information Regarding Foundation Managers:**

- a** List any managers of the foundation who have contributed more than 2% of the total contributions received by the foundation before the close of any tax year (but only if they have contributed more than \$5,000). (See section 507(d)(2))

None

- b** List any managers of the foundation who own 10% or more of the stock of a corporation (or an equally large portion of the ownership of a partnership or other entity) of which the foundation has a 10% or greater interest.

None

2 Information Regarding Contribution, Grant, Gift, Loan, Scholarship, etc., Programs:

Check here ☐ if the foundation only makes contributions to preselected charitable organizations and does not accept unsolicited requests for funds. If the foundation makes gifts, grants, etc. (see instructions) to individuals or organizations under other conditions, complete items 2a, b, c, and d.

- a** The name, address, and telephone number or e-mail address of the person to whom applications should be addressed:

Lindsay R. Boring 3988 Jones Center Drive Newton, GA 39870 (229)734-4706

- b** The form in which applications should be submitted and information and materials they should include:

No set application form

- c** Any submission deadlines:

None, except as established and published for specific programs

- d** Any restrictions or limitations on awards, such as by geographical areas, charitable fields, kinds of institutions, or other factors:

Ecological research, education and conservation that fit the mission of the Center

Part XV Supplementary Information (continued)**3 Grants and Contributions Paid During the Year or Approved for Future Payment**

Recipient Name and address (home or business)	If recipient is an individual, show any relationship to any foundation manager or substantial contributor	Foundation status of recipient	Purpose of grant or contribution	Amount
a Paid during the year				
University of Washington Box 352100, Seattle, WA 98195-2100		PC	Research	40,592
Enduring Conservation Outcomes 145 Bull Street, Suite 2, Savannah, GA 31401		PC	Research	31,425
The University of Alabama 152 Rose Administration, Tuscaloosa, AL 35487-0104		PC	Research	15,120
The Nature Conservancy of Florida 222 South Westmonte Drive, Suite 300 Altamonte Spring		PC	Research	10,873
Virginia Polytechnic Institute and State University P O Box 12487, Roanoke, VA 24026-2487		PC	Research	2,990
Baker County 4-H Club c/o Sylvia Davis, County Agent PO Box 220, Newton, GA 39870		PC	Misc Contribution	500
Georgia Chapter of The Wildlife Society 2065 US Hwy 278 SE, Social Circle, GA 30025		PC	Misc Contribution	500
Flint River Keepers 211 North Jefferson Street, Suite 8, Albany, GA 31701		PC	Misc Contribution	250
				102,250
			2013 Accrual	8,716
			2014 Accrual	(1,726)
Total			3a	109,240
b Approved for future payment				
None				
Total			3b	0

Enter gross amounts unless otherwise indicated.

Part XVI-B Relationship of Activities to the Accomplishment of Exempt Purposes

Form **990-PF** (2014)

1 Did the organization directly or indirectly engage in any of the following with any other organization described in section 501(c) of the Code (other than section 501(c)(3) organizations) or in section 527, relating to political organizations?		Yes	No
a	Transfers from the reporting foundation to a noncharitable exempt organization of:		
(1)	Cash	1a(1)	✓
(2)	Other assets	1a(2)	✓
b	Other transactions:		
(1)	Sales of assets to a noncharitable exempt organization	1b(1)	✓
(2)	Purchases of assets from a noncharitable exempt organization	1b(2)	✓
(3)	Rental of facilities, equipment, or other assets	1b(3)	✓
(4)	Reimbursement arrangements	1b(4)	✓
(5)	Loans or loan guarantees	1b(5)	✓
(6)	Performance of services or membership or fundraising solicitations	1b(6)	✓
c	Sharing of facilities, equipment, mailing lists, other assets, or paid employees	1c	✓
d	If the answer to any of the above is "Yes," complete the following schedule. Column (b) should always show the fair market value of the goods, other assets, or services given by the reporting foundation. If the foundation received less than fair market value in any transaction or sharing arrangement, show in column (d) the value of the goods, other assets, or services received.		

[illegible]

2a Is the foundation directly or indirectly affiliated with, or related to, one or more tax-exempt organizations described in section 501(c) of the Code (other than section 501(c)(3)) or in section 527? ☐ Yes ☒ No

b If "Yes," complete the following schedule.

(a) Name of organization	(b) Type of organization	(c) Description of relationship

**Sign
Here**

Under penalties of perjury, I declare that I have examined this return, including accompanying schedules and statements, and to the best of my knowledge and belief, it is true, correct, and complete. Declaration of preparer (other than taxpayer) is based on all information of which preparer has any knowledge.

Signature of officer or trustee

5/13/15 ▶ T

Date Title

President

May the IRS discuss this return with the preparer shown below (see instructions)? ☐ Yes ☐ No

**Paid
Preparer
Use Only**

Print/Type preparer's name

Preparer's signature

Date

Check ☐ if self-employed

PTIN

Firm's name ▶

Firm's EIN ▶

Firm's address ►

Phone no	
----------	--

Schedule B(Form 990, 990-EZ,
or 990-PF)Department of the Treasury
Internal Revenue Service**Schedule of Contributors**

OMB No 1545-0047

2014

▶ Attach to Form 990, Form 990-EZ, or Form 990-PF.

▶ Information about Schedule B (Form 990, 990-EZ, or 990-PF) and its instructions is at www.irs.gov/form990.**Name of the organization**

Ichauway, Inc dba Joseph W Jones Ecological Research Center

Employer identification number

58-1824778

Organization type (check one):**Filers of:****Section:**

Form 990 or 990-EZ

☐ 501(c)() (enter number) organization☐ 4947(a)(1) nonexempt charitable trust **not** treated as a private foundation☐ 527 political organization

Form 990-PF

☒ 501(c)(3) exempt private foundation☐ 4947(a)(1) nonexempt charitable trust treated as a private foundation☐ 501(c)(3) taxable private foundationCheck if your organization is covered by the **General Rule** or a **Special Rule**.**Note.** Only a section 501(c)(7), (8), or (10) organization can check boxes for both the General Rule and a Special Rule. See instructions.**General Rule**

- ☒ For an organization filing Form 990, 990-EZ, or 990-PF that received, during the year, contributions totaling \$5,000 or more (in money or property) from any one contributor. Complete Parts I and II. See instructions for determining a contributor's total contributions.

Special Rules

- ☐ For an organization described in section 501(c)(3) filing Form 990 or 990-EZ that met the 33 $\frac{1}{3}$ % support test of the regulations under sections 509(a)(1) and 170(b)(1)(A)(vi), that checked Schedule A (Form 990 or 990-EZ), Part II, line 13, 16a, or 16b, and that received from any one contributor, during the year, total contributions of the greater of **(1)** \$5,000 or **(2)** 2% of the amount on (i) Form 990, Part VIII, line 1h, or (ii) Form 990-EZ, line 1. Complete Parts I and II.
- ☐ For an organization described in section 501(c)(7), (8), or (10) filing Form 990 or 990-EZ that received from any one contributor, during the year, total contributions of more than \$1,000 *exclusively* for religious, charitable, scientific, literary, or educational purposes, or for the prevention of cruelty to children or animals. Complete Parts I, II, and III.
- ☐ For an organization described in section 501(c)(7), (8), or (10) filing Form 990 or 990-EZ that received from any one contributor, during the year, contributions *exclusively* for religious, charitable, etc., purposes, but no such contributions totaled more than \$1,000. If this box is checked, enter here the total contributions that were received during the year for an *exclusively* religious, charitable, etc., purpose. Do not complete any of the parts unless the **General Rule** applies to this organization because it received *nonexclusively* religious, charitable, etc., contributions totaling \$5,000 or more during the year ▶ \$ _____

Caution. An organization that is not covered by the General Rule and/or the Special Rules does not file Schedule B (Form 990, 990-EZ, or 990-PF), but it **must** answer "No" on Part IV, line 2, of its Form 990; or check the box on line H of its Form 990-EZ or on its Form 990-PF, Part I, line 2, to certify that it does not meet the filing requirements of Schedule B (Form 990, 990-EZ, or 990-PF).

Name of organization	Employer identification number
Ichauway, Inc. dba Joseph W. Jones Ecological Research Center	58-1824778

Part I Contributors (see instructions). Use duplicate copies of Part I if additional space is needed.

(a) No.	(b) Name, address, and ZIP + 4	(c) Total contributions	(d) Type of contribution
1	Robert W. Woodruff Foundation, Inc. 191 Peachtree Street, NE, Suite 3540 Atlanta, GA 30303	\$ 18,400,000	Person ☒ Payroll ☐ Noncash ☐ (Complete Part II for noncash contributions.)
2	Florida Fish and Wildlife Conservation Commission 620 South Meridian Street Tallahassee, FL 32399-1600	\$ 148,032	Person ☒ Payroll ☐ Noncash ☐ (Complete Part II for noncash contributions.)
3	National Fish and Wildlife Foundation 1120 Connecticut Ave., NW, Suite 900 Washington, DC 20036	\$ 115,612	Person ☒ Payroll ☐ Noncash ☐ (Complete Part II for noncash contributions.)
4	National Science Foundation 4201 Wilson Boulevard Arlington, VA 22230	\$ 85,663	Person ☒ Payroll ☐ Noncash ☐ (Complete Part II for noncash contributions.)
5	U.S. Fish and Wildlife Service 1875 Century Boulevard Atlanta, GA 30345	\$ 67,882	Person ☒ Payroll ☐ Noncash ☐ (Complete Part II for noncash contributions.)
6	Strategic Environmental Research Development Program 801 North Stuart Street, Suite 303 Arlington, VA 22203	\$ 64,761	Person ☒ Payroll ☐ Noncash ☐ (Complete Part II for noncash contributions.)

Name of organization	Employer identification number
Ichauway, Inc. dba Joseph W Jones Ecological Research Center	58-1824778

Part I Contributors (see instructions). Use duplicate copies of Part I if additional space is needed.

(a) No.	(b) Name, address, and ZIP + 4	(c) Total contributions	(d) Type of contribution
7	Department of Defense 6001 Combat Drive - 2nd Floor Room C2-101 Aberdeen Proving Ground, MD 21005-1846	\$ 61,600	Person ☒ Payroll ☐ Noncash ☐ (Complete Part II for noncash contributions)
8	Georgia Department of Natural Resources, Wildlife Resources Div 2070 U.S. Highway 278, SE Social Circle, GA 30025	\$ 43,955	Person ☒ Payroll ☐ Noncash ☐ (Complete Part II for noncash contributions)
9	University of Georgia 230 Forest Resources - 3 Athens, GA 30602	\$ 42,336	Person ☒ Payroll ☐ Noncash ☐ (Complete Part II for noncash contributions)
10	U.S. Forest Service - Southern Research Station 200 WT Weaver Boulevard Asheville, NC 28804	\$ 22,782	Person ☒ Payroll ☐ Noncash ☐ (Complete Part II for noncash contributions)
11	The Nature Conservancy - Flint River Basin Office 65 11th Avenue NE Carlo, GA 39828	\$ 19,274	Person ☒ Payroll ☐ Noncash ☐ (Complete Part II for noncash contributions)
12	National Wild Turkey Federation P.O. Box 566 Waynesboro, GA 30830	\$ 11,900	Person ☒ Payroll ☐ Noncash ☐ (Complete Part II for noncash contributions)

Name of organization	Employer identification number
Ichauway, Inc. dba Joseph W Jones Ecological Research Center	58-1824778

Part I Contributors (see instructions). Use duplicate copies of Part I if additional space is needed.

(a) No.	(b) Name, address, and ZIP + 4	(c) Total contributions	(d) Type of contribution
13	R Howard Dobbs, Jr. Foundation 133 Peachtree Street, NE, Suite 4950 Atlanta, GA 30303	\$ 9,618	Person ☐ Payroll ☐ Noncash ☐ (Complete Part II for noncash contributions.)
		\$	Person ☐ Payroll ☐ Noncash ☐ (Complete Part II for noncash contributions.)
		\$	Person ☐ Payroll ☐ Noncash ☐ (Complete Part II for noncash contributions.)
		\$	Person ☐ Payroll ☐ Noncash ☐ (Complete Part II for noncash contributions.)
		\$	Person ☐ Payroll ☐ Noncash ☐ (Complete Part II for noncash contributions.)
		\$	Person ☐ Payroll ☐ Noncash ☐ (Complete Part II for noncash contributions.)
		\$	Person ☐ Payroll ☐ Noncash ☐ (Complete Part II for noncash contributions.)

Ichauway, Inc.
Form 990-PF, Year 2014, Page 1, Part I, Line 1.
Contributors During 2014

58-1824778

Robert W Woodruff Foundation, Inc 191 Peachtree Street, NE, Suite 3540 Atlanta, Georgia 30303	\$18,400,000
Florida Fish and Wildlife Conservation Commission 620 South Meridian Street Tallahassee, FL 32399-1600	148,032
National Fish and Wildlife Foundation 1120 Connecticut Ave , NW, Suite 900 Washington, DC 20036	115,612
National Science Foundation 4201 Wilson Boulevard Arlington, VA 22230	85,663
U.S. Fish and Wildlife Service 1875 Century Boulevard Atlanta, GA 30345	67,882
Strategic Environmental Research Development Program 801 North Stuart Street, Suite 303 Arlington, VA 22203	64,761
Department of Defense 6001 Combat Drive - 2nd Floor Room C2-101 Aberdeen Proving Ground, MD 21005-1846	61,600
Georgia Department of Natural Resources, Wildlife Resources Division 2070 U S Highway 278, SE Social Circle, GA 30025	43,955
University of Georgia 230 Forest Resources - 3 Athens, GA 30602	42,336
U S Forest Service - Southern Research Station 200 WT Weaver Boulevard Asheville, NC 28804	22,782
The Nature Conservancy - Flint River Basin Office 65 11th Avenue NE Carro, GA 39828	19,274
National Wild Turkey Federation P O Box 566 Waynesboro, GA 30830	11,900
R Howard Dobbs, Jr Foundation 133 Peachtree Street, NE, Suite 4950 Atlanta, GA 30303	9,618
Environmental Protection Agency 1200 Pennsylvania Avenue, NW 3903R Washington DC 20460	2,622

\$19,096,037

Line 11 Other Income

Timber Sales	\$	185,414
Copper Sales		1,936
Corn & Milo Sales		39,885
Lease Payments		8,490
Total	\$	<u>235,725</u>

Line 16(a), Legal Fees

Ogletree, Deakins, Nash, Smoak & Stewart	\$	3,902
Total	\$	<u>3,902</u>

Line 16(b), Accounting Fees

Deloitte & Touche	\$	31,800
Total	\$	<u>31,800</u>

Line 16(c), Other Professional Fees

Scientific Advisors	\$	33,136
Service Consultants		88,993
Total	\$	<u>122,129</u>

Line 18, Taxes

Real Estate/Property Taxes	\$	144,917
Baker County Taxes		11,878
Misc. Taxes		215
Total	\$	<u>157,010</u>

AMENDED AND RESTATED BYLAWS

ICHAUWAY, INC.

ARTICLE I

Name

The name of the corporation shall be Ichauway, Inc.

ARTICLE II

Purposes

The objects or purposes to be promoted or carried on by this corporation are such strictly charitable, scientific and educational activities as will promote the advancement or wellbeing of mankind, either directly, or indirectly through its cooperation with public or private agencies having like purposes or objects, and the corporation shall be forever operated exclusively for said purposes.

The primary objects of this corporation are to preserve and protect the significant natural resources of Ichauway Plantation in Baker County, Georgia, and establish and operate there a center for conservation, scientific research and education. The center shall be named the Joseph West Jones Ecological Research Center, and shall be devoted to ecological research and education, including the study of land management, agriculture, forestry, wildlife management and conservation.

ARTICLE III

Principal Office

Section 1. The principal office of the corporation shall be in the City of Atlanta, County of Fulton, and State of Georgia.

Section 2. The corporation may also have an office or offices at such other place or places as the Board of Trustees may from time to time determine.

ARTICLE IV

Corporate Seal

The corporate seal of the corporation shall have inscribed thereon the name of the corporation, the year "1988" and the words, "Corporate Seal, Georgia "

ARTICLE V
The Board of Trustees

Section 1. The powers of the corporation shall be vested in and exercised by a Board of Trustees of five members, which shall be composed, upon the organization of the corporation, of the initial members named in the Articles of Incorporation, and thereafter, of the persons named by them, or by the survivor or survivors of them, as their successors.

Section 2. Any vacancy in the Board of Trustees however arising shall be filled by the vote of the remaining Trustee or Trustees, at any regular meeting of the Board, or at any special meeting of the Board called for that purpose.

Section 3. Any Trustee may at any time resign by written resignation filed with the Secretary of the corporation.

Section 4. Trustees elected on or after December 9, 2002, shall serve through their 75th year, their terms ending upon the first meeting of the Board of Trustees following their 76th birthday.

ARTICLE VI
Meetings of the Board of Trustees

Section 1. The Board of Trustees may hold its meetings at the principal office of the corporation or at such other place or places as it may from time to time designate.

Section 2. The annual meeting of the Board of Trustees shall be held on the first Tuesday in April each year. Other meetings of the Board of Trustees may be held at such other times as its members may designate. At least ten (10) days prior to all meetings, regular or special, of the Board of Trustees, written notice thereof shall be sent by the Secretary to each Trustee by mail to the address furnished the Secretary by such Trustee.

Section 3. Actual presence of a Trustee at any meeting shall constitute a waiver of any notice herein provided as to such Trustee. Any notice of meeting herein provided may be waived by written waiver filed with the Secretary of the corporation.

Section 4. A quorum at any regular or special meeting shall consist of a majority of the Trustees then in office.

Section 5. The Trustees may hold their meetings and have one or more offices and keep the books of the corporation within or without the State of Georgia at any office of the corporation or at such other place or places as the Board of Trustees may from time to time determine.

ARTICLE VII
Compensation

The Board of Trustees may from time to time fix reasonable compensation for their services and for expenses incurred in attending meetings of the Board. Nothing herein contained shall be construed to preclude any Trustee from serving the corporation in any other capacity and receiving reasonable compensation therefor.

ARTICLE VIII
Officers of the Corporation

Section 1. Officers. The officers of the corporation shall consist of a Chairman, a Vice Chairman, a President, a Secretary, a Treasurer, a Director of the Joseph West Jones Ecological Research Center and such other officers as the Board of Trustees may deem necessary or desirable. Such officers shall be elected by the Board of Trustees at any meeting and shall serve at the pleasure of the Board. Any two or more offices may be held by the same person except that neither the Chairman nor the President may also serve as Secretary.

Section 2. Chairman. The Chairman shall be a member of the Board of Trustees of the corporation. He shall be the chief executive officer of the corporation, shall preside at all meetings of the Board of Trustees and shall generally direct and supervise all affairs of the corporation, subject to the direction of the Board of Trustees. He shall be authorized to execute all notes, bonds, deeds, conveyances, and contracts of the corporation as more fully provided hereinafter.

Section 3. Vice Chairman. The Vice Chairman shall be a member of the Board of Trustees of the corporation and shall perform the duties and have the powers of the Chairman during the absence, disability, or incapacity of the Chairman, and shall perform such other duties as the Board shall from time to time designate.

Section 4. President. The President shall be the chief administrative officer of the corporation, subject to the supervision and direction of the Chairman and the Board of Trustees. He shall be responsible for operation of the principal office of the corporation, which shall provide administrative services for the general management of the property and affairs of the corporation and the direction of the corporation's programs. Subject to the approval of the Board of Trustees, he shall determine staff requirements and budget and shall be authorized to execute all contracts related to the corporation's administration.

Section 5. Secretary. The Secretary shall be present at all meetings of the Board of Trustees, shall keep an accurate written record of all proceedings of the meetings in a minute book provided for that purpose, and shall have custody of and attest to the seal of the corporation. He shall attend to the giving and serving of all notices of the corporation, and shall have charge of other documents as the Board of Trustees may direct, all of which shall be open to the examination of any officer or trustee.

Section 6. Treasurer. The Treasurer shall be the custodian of all funds of the corporation, and of all trust funds which may be placed in its control for administration. He shall be responsible for keeping an accurate account of such funds and shall report in writing at each meeting of the Board of Trustees on all property, cash and securities on hand and on all transactions, receipts and disbursements since his last report to the Board.

Section 7. Director of the Joseph West Jones Ecological Research Center. The Director of the Center shall serve as chief administrative officer of the Joseph West Jones Ecological Research Center, subject to the supervision and direction of the Chairman and President and the Board of Trustees.

Section 8. Other Duties and Authority. Each officer, employee and agent of the corporation shall have such other duties and authority as may be conferred upon him by the Board of Trustees or delegated to him by the Chairman.

Section 9. Compensation. The salaries of the officers shall be fixed from time to time by the Board of Trustees.

ARTICLE IX Committees of the Board of Trustees

The Board of Trustees may create standing or special committees of the Board of Trustees with such powers and duties as the Board of Trustees may determine.

ARTICLE X Advisory Committees

The Board of Trustees may establish one or more Advisory Committees to assist the Board or the officers in the design, conduct and evaluation of the programs of the corporation. The membership of such Committees, their powers and duties and the compensation, if any, payable for the services of Advisory Committee members shall be determined by the Board of Trustees.

ARTICLE XI Checks and Transfers of Property

Section 1. All checks, drafts, and demands or orders for money, and all notes or obligations of this corporation, or paper discounted by it shall be signed by two of the following persons: the Chairman, Vice Chairman, President, Treasurer, or Secretary of the corporation or the Director of the Joseph West Jones Ecological Research Center, or by such other managers of the Center as designated from time to time by the corporation's officers or Board of Trustees.

Section 2. All transfers of property of this corporation shall be signed by the Chairman, Vice Chairman or President, and attested by the Secretary. Any person, firm or corporation acquiring any such property or acting as transfer agent of the property to be transferred shall be fully protected when this corporation's property is sold or transferred by a writing bearing the signatures aforesaid and no person, firm or corporation need ascertain the authority of the persons so signing to make the sale or transfer so signed.

ARTICLE XII
Indemnity

The corporation shall indemnify, to the fullest extent permitted by the Georgia Nonprofit Corporation Code and, if applicable, section 4941 of the Internal Revenue Code of 1986, as amended, any individual made a party to a proceeding because such individual is or was a trustee or officer of the corporation against liability incurred in the proceeding, if such individual conducted himself or herself in good faith, and (1) in the case of conduct in his or her official capacity, reasonably believed his or her conduct was in the best interests of the corporation, (2) in all other cases, reasonably believed that his or her conduct was at least not opposed to the best interests of the corporation, and (3) in the case of a criminal proceeding, had no reasonable cause to believe his or her conduct was unlawful.

The corporation shall pay for or reimburse the reasonable expenses incurred by a trustee or officer who is a party to a proceeding because such individual is a trustee or officer in advance of final disposition of the proceeding, if:

- (a) The trustee or officer furnishes the corporation a written affirmation of his or her good faith belief that he or she has met the standard of conduct set forth in this Article or that the proceeding involves conduct for which liability has been eliminated by the corporation's Amended and Restated Articles of Incorporation; and
- (b) The trustee or officer furnishes the corporation a written undertaking to repay any advances if it is ultimately determined that the trustee or officer is not entitled to indemnification.

The written undertaking required by paragraph (b) above must be an unlimited general obligation of the trustee or officer but need not be secured and may be accepted without reference to financial ability to make repayment.

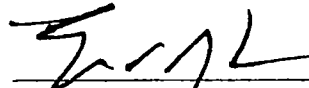
The corporation shall also pay for or reimburse the reasonable expenses incurred by a trustee or officer because such individual is a trustee or officer in connection with his or her appearance as a witness in a proceeding at a time when he or she is not a party to such proceeding.

ARTICLE XIII
Amendment of Bylaws

These bylaws may be amended, altered or repealed at any regular or special meeting of the Board of Trustees, provided that notice of the proposed amendment be given in writing to all of the Trustees at least five (5) days before such meeting.

I, Erik S. Johnson, duly elected and acting Secretary of Ichauway, Inc. do hereby certify that the above Amended and Restated Bylaws were enacted by the Board of Trustees of Ichauway, Inc. on April 1, 2014.

This 1st day of April, 2014.



Erik S. Johnson, Secretary

Part II, Line 14 (990-PF) - Land, Buildings, and Equipment

		18,483,699	14,854,370	15,213,976	2,583,188	3,269,723	3,269,723
	Item or Category	Cost or Other Basis	Accumulated Depreciation beg. Of year	Accumulated Depreciation end Of year	(a) Book value beg. of year	(b) Book value end of year	(c) FMV end of year
1	Buildings and improvements	10,183,086	7,306,762	7,602,976	1,696,458	2,580,110	2,580,110
2	Furniture and Fixtures	656,517	689,949	656,517	586	0	0
3	Equipment	1,930,428	1,777,838	1,818,094	91,747	112,334	112,334
4	Vehicles	1,737,758	1,533,457	1,536,158	73,815	201,600	201,600
5	Lab Equipment	1,489,199	1,257,247	1,209,356	276,936	279,843	279,843
6	Computer Equipment	664,272	491,520	588,148	172,032	76,124	76,124
7	Infrastructure	1,241,072	1,235,678	1,237,908	5,394	3,164	3,164
8	Other Equipment	581,367	561,919	564,819	15,248	16,548	16,548
9	Construction in Progress	0	0	0	250,972	0	0
10							
11							
12							
13							
14							
15							
16							
17							

Ichauway, Inc.

58-1824778

Form 990-PF, Year 2014, Page 1, Part 1, Line 23(a)(d).

Other Expenses

General Supplies	\$	21,597
Office Supplies		12,635
Household Supplies		20,365
Misc. Supplies		9,213
Field Supplies		180,717
Grounds Supplies		172,074
Computer Supplies		8,999
Lab Supplies		46,402
Postage		6,820
Library Supplies		18,277
Miscellaneous		15,290
Uniforms		32,151
Fuel		255,155
Memberships & Dues		5,310
Maintenance Contracts		49,667
Equipment Lease		4,345
Maintenance & Repairs		167,544
Contract Services		96,190
Repairs		107,150
Contract Services/Computers		117,903
General Insurance		220,289
Graduate Assistantships		202,375
Minor Equipment		57,971
Total, Line 23(a)	\$	1,828,439
12/31/13 accrual of payables		101,331
12/31/14 accrual of payables		(103,143)
Total, Line 23(d)	\$	1,826,627

[illegible]

(a) Name and Address	(b) Title, and average hours per week devoted to position	(c) Compensation	(d) Contributions to employee benefit plans	(e) Expense account Other allowances
OFFICERS				
P. Russell Hardin 191 Peachtree Street NE, Suite 3540 Atlanta, Georgia 30303	President 5 hours per week	\$0	\$0	\$0
J Lee Tribble (retired June 30, 2014) 191 Peachtree Street NE, Suite 3540 Atlanta, Georgia 30303	Treasurer 5 hours per week	0	0	0
Erk S Johnson 191 Peachtree Street NE, Suite 3540 Atlanta, Georgia 30303	Secretary/Treasurer 5 hours per week	0	0	0
TRUSTEES				
James B Williams 191 Peachtree Street NE, Suite 3540 Atlanta, Georgia 30303	Chairman Trustee 5 hours per week	0	0	0
James M Sibley 191 Peachtree Street NE, Suite 3540 Atlanta, Georgia 30303	V-Chairman 1 hour per week	0	0	0
Wilton Looney 191 Peachtree Street NE, Suite 3540 Atlanta, Georgia 30303	Trustee 1 hour per week	0	0	0
Charles H. McTier 191 Peachtree Street NE, Suite 3540 Atlanta, Georgia 30303	Trustee 1 hour per week	0	0	0
E Jenner Wood III. 191 Peachtree Street NE, Suite 3540 Atlanta, Georgia 30303	Trustee 1 hour per week	0	0	0
Total		\$0	\$0	\$0

Director's 2014 Annual Report to the Trustees of Ichauway, Inc.

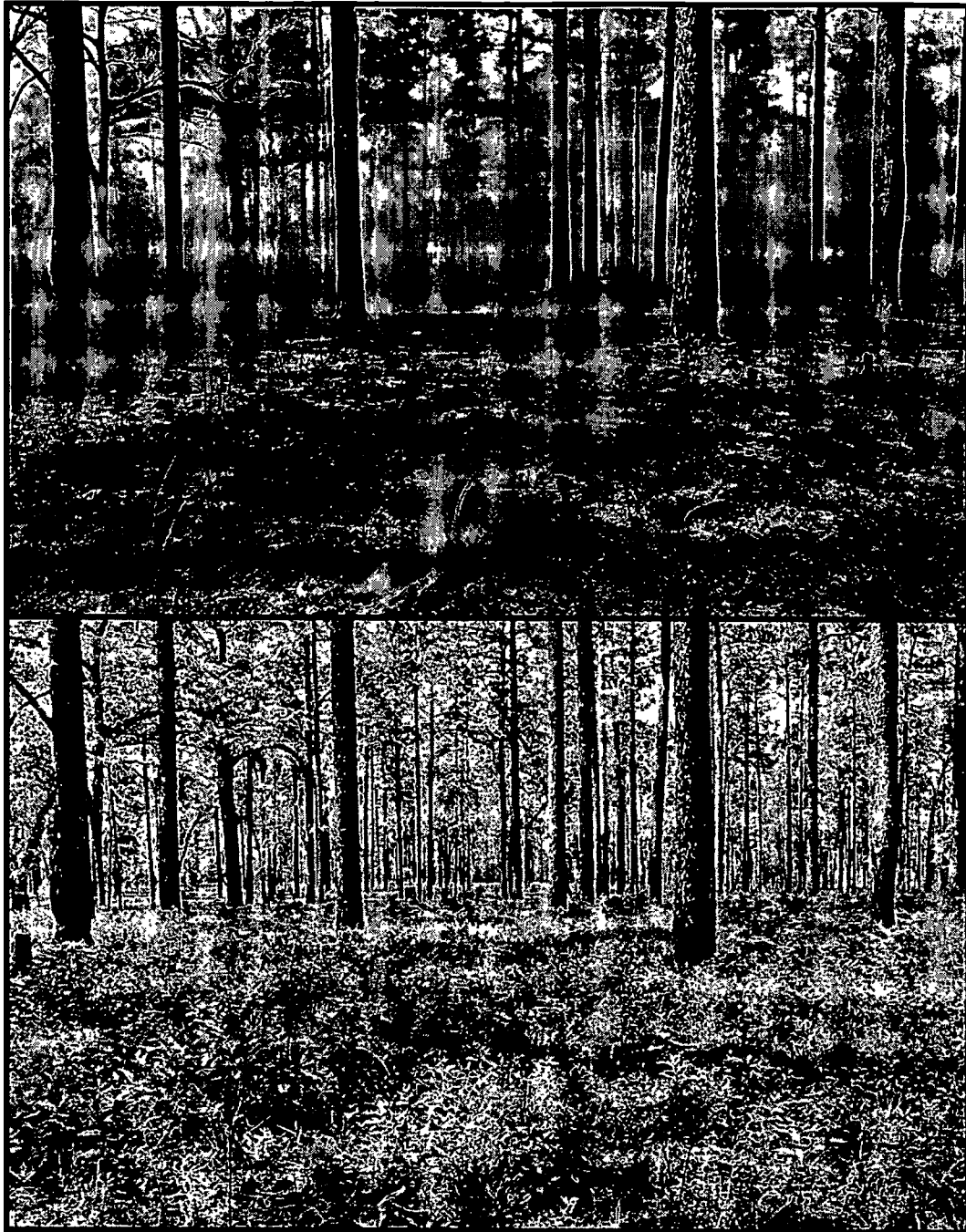


photo by Richard T. Bryant

**Submitted by
Lindsay R. Boring, Ph.D.
Director**

Introduction and Summary

The Joseph W. Jones Ecological Research Center at Ichauway seeks to understand, to demonstrate, and to promote excellence in natural resource management and conservation of the landscape of the southeastern Coastal Plain of the United States.

Our 2014 Jones Center activities included numerous major achievements in research, education and conservation highlighted below, as well as planning and infrastructure development projects that significantly augmented our core staffing and facilities. Dr. Steven Brantley joined us in September and will conduct research in ecohydrology. Our staff number 87 full-time personnel, including six senior research scientists, three senior education staff, professional land managers, plus an additional twenty graduate students supplemented by over 50 outside collaborators. We hosted approximately 771 visitors/students on-site for our education and outreach programs.

We completed a major renovation to our research building this year, which added a 90-seat auditorium, a new conference room, a reception area and atrium and redesigned Information Technology offices and space. The Conservation program provided quality heart pine woodwork for much of the new facility through our timber salvage operations, lumber milling and quality control inspections throughout the project. This updated facility will greatly enhance our seminar speaker program, our teleconferencing options and our ability to comfortably host larger groups of people for research and education programs.

Scientific Advisory Committee (SAC)

The SAC members, Bob Larimore, Gene Likens (Founding Member), Bob Naiman (Chair), Brian Richter, Nova Silvy and Jim Vose, convened at Ichauway February 9-12, 2015. The SAC spent this period in meetings, discussions and field tours with members of the Robert W. Woodruff Foundation (RWWF), Center staff, graduate students and support personnel.

The following is quoted from the overview of the SAC report from February 2015:

"We continue to be extremely pleased by the continuing intellectual growth, productivity and maturity of the Center's programs and staff. The SAC has stressed the need for greater integration and synthesis among the various research, conservation and education programs for many years and we note the outstanding progress, particularly during the past few years as the programs have matured and partnerships formed. While we believe there is still much to be achieved, we compliment the Center and its staff on their outstanding progress. Further, we are appreciative of the time and effort expended in organizing and perfecting the presentations, posters and tours during our meeting. We judge the overall atmosphere at the Center for scholarly inquiry and collaboration to be collegial and

supportive. We see the next major challenges as being the recruitment of a scientist to fill the Forest Ecology position, increasing publications in high-quality, peer-reviewed journals and publishing long-term monitoring data."

Research

General

The past year has been dynamic and full of planning activities and the addition of key new staff. Further planning and staffing in 2015 will provide a solid foundation for growing our future research directions. Our current research projects are highly productive in scientific output, graduate students and application. Our efforts have achieved high levels of impact upon natural resource conservation and management, and the program excellence has been recognized regionally and nationally. This is due in part to the quality of research and knowledge that are contributed by the research staff.

Center funded long-term research is organized into five flagship projects, described in more detail below. These projects are led by our scientists but were enhanced by three visiting scientists, over 50 other collaborators, twenty graduate students, and eight new external research grants awarded in 2014. Education activities and events are associated with each project and facilitate the sharing of information from the project with student and professional groups. Long-term research projects are provided with stable funding and are reviewed, revised and renewed on five year cycles. In the Center's twenty-one years of research many of these projects now have longevity of data records which provide unique and highly valuable scientific and applied insights. Most exceed those of the usual research projects conducted elsewhere, which are generally short-term and funded annually or in two to three-year spans.

The relatively small wildlife program led by our two scientists is innovative and has matured to effectively integrate a large team of graduate students and outside cooperators. They are producing broad research that has great application and impact upon management of rare wildlife species as well as species such as whitetail deer and their predators.

The forest ecology and Flint River Basin projects are both continuing long-term research and partnerships, but they are in transition following the passing of one scientists and the retirement of another. Replacement of scientists is very important to provide new ideas and expertise on both projects. With one new scientist, Steven

Brantley, already on board we have a powerful research linkage between forests and streams as he researches water budgets of ecosystems and the effects of land use upon water yields into streams and aquifers. However, we have other research opportunities and needs for the future with this turnover of senior researchers, and we will continue to search for a new Forest Ecologist in 2015.

Research Projects

The long-term research projects are complemented with additional but related externally funded projects that either expand our Ichauway projects, or extend our studies to be regional in scope with other valuable sites, cooperators and issues outside of Ichauway. In 2014 these were key project goals and achievements for each long-term project:

1) **Ecosystem Dynamics of Frequent-Fire Longleaf Pine Woodlands**

Investigators: Lindsay Boring, Kay Kirkman, Steven Brantley and Mike Conner

This is a broad long-term research project that began twelve years ago with the goal to understand the complex feedback mechanisms between fire regime, site resources, productivity, and species in frequent-fire longleaf pine ecosystems. The results have been published steadily over the years, and have been central to our knowledge of longleaf ecosystem structure and function to guide more recent forest management and restoration initiatives. The original project, often referred to as the "Forest Productivity and Biodiversity Project", provided an extensive research platform, created numerous opportunities for outside collaboration, supported many graduate students, and developed valuable long-term data sets. These originally included data related to species richness of flora and key fauna, forest composition and structure, controls on productivity, longleaf site variability, processes controlled by fire and shifted by fire suppression, and effects of N enrichment and increased water on ecosystem processes and composition.

Three years ago we ceased the costly fertilization and irrigation treatments but retained the mesic and xeric reference sites along with the fire suppression treatments. In 2015 we will add a fire restoration treatment to the study to examine the effects of reintroduced burning into mesic and xeric longleaf that has a ten year old successional midstory of oaks and shrubs. We refer to this component as the "Fire Exclusion and Restoration" study.

In addition to this component, six years ago Bob Mitchell developed a group of outside collaborators to pursue research objectives related to "Fire and Water Controls on Carbon Dynamics" of longleaf pine. This study uses two central eddy covariance towers, data from the above study, and soil CO₂ measurements located on the xeric and mesic longleaf pine reference plots. The tower technology and CO₂ measures with PI Greg Starr are partially supported by an external DOD grant, and the field sampling is maintained in conjunction with the other Jones Center research components.

- We found that aboveground productivity and N cycling increased with fire exclusion and N addition resulting from significant development of oak midstory and increased litter inputs, but groundcover species richness and productivity declined.
- High plant species richness and coexistence in reference longleaf forest is determined by seed supply relative to episodic soil moisture availability, fire contributing to stochastic seed and seedling mortality, and some fire influence on scarifying hard seedcoats of specialized plants such as legumes.
- Species richness is enhanced by irrigation and declines sharply with fire exclusion, with water supply more important than seed supply for seedling establishment in droughty, sandy soils. Fire has a greater influence than productivity patterns upon biodiversity.
- More than a decade of fire exclusion resulted in substantial declines in small mammal populations, presumably due to loss of herbaceous ground cover. Avian species richness within the longleaf pine matrix appears more related to site productivity than fire exclusion; species richness is greater in mesic than in xeric sites. However, fire suppression has potentially shifted avian species composition with some grassland specialists becoming less common and species typically associated with hardwoods becoming more common when fire is excluded.
- A recent paper in New Forests by Greg Starr found that our xeric longleaf site was carbon neutral and our mesic site was a moderate sink of carbon during one year of study. However, with C losses from burning subtracted from net ecosystem exchange rates both sites became moderate carbon sources for that year. Longer term study periods are needed as well as a broader understanding of other complex interactions between fire and carbon dynamics.
- Bob Mitchell's last publication was in Forest Ecology and Management and it resulted from a technical input report on Fire and Climate Interactions written for the National Climate Assessment, with the US Global Change Research Program. In the review he and the six other coauthors synthesized climate change-fire interactions, discussed the impacts of uncertainty in a human dominated landscape, and examined how climate change projections and uncertainties might impact our ability to manage forests in the southeast.
- With Alabama and USFS cooperators the Center received \$169,000 in DOD funding to support a large portion of the carbon research related to maintaining the eddy covariance tower efforts over 2014-2016.

- Dr. Steven Brantley's new research on forest ecophysiology, tree stress, and ecohydrology will address the effects of fire suppression and fire reintroduction on longleaf pine forest health and hydrologic processes, and track the changes over time in comparison to the reference conditions on mesic and xeric sites.
- We added new UGA collaborating entomologist Dr. Kamal Gandhi and a new PhD. Student to work with Dr. Brantley to address tree physiological health, susceptibility of longleaf pines to bark beetle attack under burned, fire-suppressed and fire restoration treatments on mesic and xeric sites.

2) **Ecological Forestry in the Longleaf Pine Forest Type**

Investigators: Mike Conner, Steve Jack, Kay Kirkman, Kevin McIntyre and Lora Smith

The Jones Center is well-positioned to help answer emerging restoration and management questions due to both a substantial body of research and the exemplary forest and wildlife management experience on Ichauway. The goal for this project is to meet the challenge of providing sound management information supported by a strong scientific understanding through coordinated research, outreach and demonstration efforts. The two project focal areas are: 1) management of longleaf plantations to achieve a multi-aged condition sustained by natural regeneration and a diverse plant community, and assessment of wildlife community use at different stages of stand development during the restoration process; and 2) how landscape scale changes in landcover, created by both natural disturbance and management, affect animal populations and communities at a larger scale. The majority of the project efforts to-date have addressed the first of these two focal areas.

- We developed an outline for a book on restoration of longleaf pine ecosystems with a major focus on synthesis of Jones Center work from the last 20 years; proposal is in preparation for identified publisher.
- We re-measured all mapped trees and re-sampled groundcover vegetation in the Long Term Ecological Forestry plots.
- We initiated longleaf pine thinning treatments for the long term restoration project and stands were prepared for ground cover seeding.
- We collected over 300 pounds of native ground cover seed from the native seed garden and natural longleaf pine stands for use in proposed restoration studies.
- We implemented an externally funded study to compare native groundcover ecotypes in four common gardens: Georgia (Ichauway), South Carolina, Florida, and Mississippi. We will address ecological and other issues related to seed transfer zones.

- We re-sampled vegetation at St. Marks National Wildlife Refuge in a flatwoods longleaf pine site after fifteen years following stand conversion treatments.
- An M.S. graduate student is currently examining the composition of native bees in a gradient of longleaf pine restoration stages, which will help to identify potential long term monitoring goals.
- Funding was obtained to integrate long-term monitoring and research data to develop wildlife-habitat relationship models for open-pine grassland systems. These will be used to evaluate effective desired landscape conditions as predictors of wildlife occurrence.
- A landscape-level tick population model was developed to identify the relationship between ticks and prescribed fire which suggests that burning as little as 10% of the landscape may have substantial impact on landscape-level tick abundance.
- Soils were sampled in the long-term restoration plantation and old field stands to establish a baseline carbon and nitrogen profile prior to thinning and/or planting.

3) **Ecological Role of Mesopredators, the Effects of Mesopredator Control and Habitat Approaches for Managing Predation**

Investigators: Mike Conner and Lora Smith

- Continued monitoring small mammals, gopher tortoise, and snake populations within the exclosure and control plots.
- Completed analyses of data collected in 2012/2013 on the combined effects of red imported fire ants (RIFA) and predators on cotton rat and eastern fence lizard recruitment and survival.
- Completed data analyses associated with wild turkey nest success and have begun work on a model of nest site selection relative to predation risk.
- Completed data collection of 33 GPS tagged coyotes and 24 white-tailed deer.
- Completed data analysis of predator exclosure impacts on white-tailed deer recruitment.
- Began a collaborative study (JWJERC, UGA, GA DNR) to develop a camera monitoring approach to estimate white-tailed deer abundance and recruitment.
- Began collaborative research (JWJERC, UGA, FL FWC, NPS, USFWS) to study deer response to hydrology, predators and human activity to better understand how these activities may impact Florida panthers.

- Captured and placed GPS transmitters on gray foxes (24 to date).
- Initiated a study to evaluate the role of mesopredators and RIFA as scavengers.
- Continued data collection associated with long-term population ecology and large-scale movement patterns of gopher tortoises.
- Collected data to evaluate whether mesopredator exclusion affects foraging behavior.
- We found evidence that RIFA significantly impact the behavior of native vertebrates (Southern toads and cotton rats as models) and that RIFA can have significant impacts on recruitment (fence lizard model) and survival (cotton rat model) of native vertebrates.
- We found that mesopredator exclusion significantly affects small mammal body mass, presumably the result of altered foraging behavior.
- We found that artificial gopher tortoise nests at burrows experience greater predation than nests located at other sites, suggesting that burrows offer a visual cue to predators. Nine-banded armadillos were the major predator of tortoise nests at Ichauway.
- Preliminary data analyses suggests that snake abundance within mesopredator exclosures is greater than in controls, providing an explanation for similar population dynamics of some small mammal populations relative to exclosure treatment.
- Observational data suggested that predation risk decreased white-tailed deer reproduction, indicating that predation risk affects reproduction rates, possibly via tradeoffs associated with anti-predator behaviors. Related research suggested that our mesopredator exclosures produced an estimated twenty additional fawns/year. Although increased fawn survival contributed to this increase, the greatest impact resulted from adult females preferentially using exclosures as parturition sites. This illustrates the importance of predation risk as a driver of prey space use.

4) **Hydrologic Variation and Human Development in the Lower Flint River Basin**

Investigators: Steve Golladay, Paul McCormick and Steven Brantley

Our ongoing research is assessing the effect of water withdrawals and land use on water resources of the lower Flint River Basin (FRB). Since the 1970's, population growth and rapid expansion of irrigated agriculture in southwestern

Georgia have led to increased water demands from agriculture, industry, and municipalities. These increased demands have stressed regional water resources, particularly during droughts, and likely have negatively impacted aquatic biota and ecosystem services. Our research addresses three fundamental questions associated with human activity in the lower FRB: (1) how does human land use and appropriation of water influence water availability and water quality in the lower FRB; (2) how does intra- and inter-annual variation in water availability affect aquatic ecosystems of the lower FRB; and (3) what are the characteristics of environmental flow regimes necessary to provide for human demand while maintaining ecosystem integrity and services.

- A geospatial model (Soil Water Assessment Tool) was parameterized and calibrated to explore landuse-landcover influences on water availability and water quality in the Ichawaynochaway watershed. This model will be used to identify landscape factors influencing streamflows and to predict effects of future landuse and climate scenarios on stream conditions.
- Development of a GIS tool was begun to characterize water-use (e.g., ET) signatures for different landscape types within the Ichawaynochaway watershed. This tool will be used to assess the effects of future landuse changes (e.g., increased acreage of restored longleaf pine, riparian easements, and other landowner incentives) on seasonal and annual water yields.
- An analysis of the effects of streamflow alterations on instream habitat availability has been completed for the Ichawaynochaway watershed. Results of this analysis were presented at an international meeting and are contained in a draft manuscript to be submitted in early 2015.
- Two graduate students have completed their field data collection, which is focused on quantifying the effects of reduced and intermittent streamflow on biological assemblages (periphyton, macroinvertebrates) in the lower Flint River Basin. Two draft manuscripts have been produced based on the results of this work. Two other grad students have or are completing their graduate research on the function of Lake Seminole. Two new graduate students are being recruited through UGA Coop.
- Stream-water ion chemistry was evaluated as a means of identifying water sources contributing to stream flows under different watershed hydrologic conditions. Analyses revealed clear spatial and temporal patterns that can be used to identify the water sources contributing to different portions of the stream hydrograph.
- A Ph.D. Student working on Lake Seminole was awarded an NSF Doctoral Dissertation Improvement Grant to support studies of invasive species effects on lake function.

- During summer 2014, we participated in 2 multi-institutional, interdisciplinary teams that developed USDA NIFA research proposals evaluating effects of agriculture and agriculture management on water quality and quantity in the ACF Basin.
- An M.S. Student was awarded the best student presentation for work on invasive species in Lake Seminole at the Florida Lake Management Society Annual Meeting in 2014.
- A multi-year study was completed on the responses of freshwater mussels to drought and agricultural water conservation measures in critical habitat areas of the lower Flint. Results were presented to funding agencies, Florida Water Resource Conference, and Georgia Water Resource Conference (2015).
- Served as Technical Advisor and Liaison for the ACF Stakeholders group; helped identify information needs and contributed to development of a draft plan for water allocation in the ACF Basin.
- A case study of ecological risk was completed for the upper and lower Flint using sustainable boundary methodology for inclusion in the Ichauway Conference manuscript and presentation at the Georgia Water Resources Conference.
- Serving on the Technical Planning Committee for the 2015 Georgia Water Resources Conference.

5) Depressional Wetlands in the Coastal Plain Landscape

Investigators: Kay Kirkman, Lora Smith and Steve Golladay

This long-term study is designed to enhance the understanding of wetland functions and services that could provide future policy guidance relative to wetland conservation issues (at federal and state levels). This study integrates investigations of the functional role of wetlands in the region, specifically with the goals to: 1) provide new information related to linkages of isolated wetlands to the regional watershed and jurisdictional waters; and 2) relate wetland ecosystem services to human health and well-being; and 3) determine the relationship between wetland condition and ecosystem services using Ichauway wetlands as reference conditions for evaluating functions and services of wetlands across a gradient of wetland alteration in the region. Long-term monitoring of wetland water levels, water quality and biota (plants and invertebrates including mosquitoes, fish, amphibians and birds) at reference wetlands is ongoing.

- We documented movement of fishes between isolated wetlands in ephemeral stream channels that identifies the importance of landscape connectivity in conservation of biological diversity and demonstrates a significant nexus between isolated wetlands and "Waters of the United States."

- A Ph.D. student is currently examining episodic hydrologic connectivity of geographically isolated wetlands with surface waters using long term hydrologic data and on-going water quality data, adding to policy debate over the definition of "Waters of the United States " based on critical wetland linkages.
- An M.S. student research project is determining impacts of agricultural land use on ecosystem functions of isolated wetlands, specifically identifying effects on amphibian dispersal corridors and genetic diversity.
- We published research identifying unique mosquito habitat selection of wetlands impacted by agricultural nutrient amendments.
- We submitted a paper to the Proceedings of the National Academy of Sciences defining geographically isolated wetlands as critical to conservation of ecosystem functions, addressing the definition of "Waters of the United States".
- An NSF proposal was submitted to develop a regional and international research coordination network to engage a group of multidisciplinary scientists in examining the functions and connectivity of geographically isolated wetlands across the North American landscape.
- A pre-proposal was submitted to NSF to quantify the flux of energy and nutrients between uplands and wetlands through wetland-breeding amphibian communities. An M.S. student will be recruited in 2015 to collect preliminary data on this topic.

Productivity

Our research program continues to achieve a high level of productivity in spite of the loss of a senior scientist months ago. However, we will continue to work toward more first authored papers and publish a synthesis book on longleaf pine restoration and ecology during the next two years. In 2014 our Staff published or had in press 28 articles in peer-reviewed research journals or book chapters, and eleven outreach and other publications. Numerous presentations were given by staff and graduate students at national and regional professional meetings. A total of twenty graduate students from our universities were supported by the Center in this past year.

External Support and Collaboration

Our staff has secured external funding from fourteen agencies for a total of twenty-four projects for research and outreach programs that are compatible with organizational objectives. These awards, spanning multiple years, totaled \$3,468,602. The total received in 2014 was \$696,037.

1. Florida Fish and Wildlife Conservation Commission (1)
2. National Fish and Wildlife Foundation (NFWF) (2)
3. National Science Foundation (2)
4. US Fish and Wildlife Service (3)
5. US Department of Defense Strategic Environmental Research and Development Program (DOD-SERDP) (1)
6. US Department of Defense (1)
7. Georgia Department of Natural Resources (1)
8. University of Georgia (4)
9. USDA Forest Service (2)
10. The Nature Conservancy (3)
11. National Wild Turkey Federation (1)
12. R. Howard Dobbs Foundation (1)
13. Environmental Protection Agency (1)
14. Valdosta State University (1)

Education and Outreach

General

Our Education and Outreach program had a very active year in 2014 with 41 groups and 711 participants visiting the Center for workshops, field tours, university accredited Maymester courses, continuing education courses and special events. University students comprised 36% of our total participants, with natural resource professionals making up the other 64%. Natural resource professionals represent federal and state agencies and non-governmental conservation groups and are actively engaged in on-the-ground management as well as policy decisions about natural resource management in Georgia and across the Southeast. The average contact time for visitors this past year was 2.1 days each. All staff participated in these programs, which are generally led and coordinated by Education Staff. Both Research and Conservation staff are key participants, and most have these activities included as supplemental parts of their job descriptions. There are also significant contributions that the Jones Center makes regionally and nationally by participating in off-site regional and national meetings, partnering with other organizations, and as science and conservation advisors on topics such as regional water resources, longleaf pine restoration and management and prescribed fire. Highlights on several of these topics are below with details listed in the Appendix.

On-Site Education and Outreach Activities

A total of ten university student groups attended Center short courses, field tours and other events, with visits ranging from one to three days. Field trip topics included forest ecology, fire ecology, wildlife management, forestry, conservation biology, wetland ecology, hydrology and aquatic ecology. Six different universities were represented this past year, with most groups from University of Georgia and the University of Florida. Other groups included Abraham Baldwin Agricultural College, the University of the South, Berry College and Arkansas Tech.

We conducted three week-long "Maymester" classes for the University of Georgia (UGA) and the University of Florida (UF) as two semester hour courses for advanced undergraduates and graduate students. The courses were Prescribed Fire, Coastal Plain Ecosystems and Wildlife Field Methods.

Our education/outreach events and advisement for natural resource professionals, agencies and other organizations have steadily grown to comprise 64% of our total annual attendance. The diversity of our staff permits us to offer a broad range of on-site activities and events, especially in the areas of prescribed fire, ecological restoration, ecology and management of longleaf pine, imperiled species management and water resource issues.

Highlights of our on-site events in 2014 included a major workshop as part of a project examining the role of large-acreage private landowners in longleaf and the economic considerations related to that group of landowners. Center staff led multiple workshops for natural resource professionals working with conservation efforts related to the gopher tortoise, a candidate for federal listing as a threatened species. Other workshops for natural resource professionals were held on diverse topics such as ecological forestry, native groundcover identification and restoration, prescribed fire, freshwater mussel conservation and climate change.

Off-Site Education and Outreach Activities

Our off-site advisement and outreach to natural resource professionals, agencies, policy makers and conservation groups continued in 2014 with our leadership and participation in several regional conservation partnerships. These are significant contributions focused largely upon regional restoration and management efforts with longleaf pine (e.g. Longleaf Partnership Council, America's Longleaf Restoration Initiative), the Georgia Prescribed Fire Council and the National Coalition of Fire Councils and water resource advisory roles with Apalachicola-Chattahoochee-Flint Basin issues for state and federal agencies and non-governmental organizations. Off-site longleaf pine conservation and restoration activities included meetings and events starting with the Longleaf Partnership Council. This group collaborates in the implementation of the 2009 Range-wide Conservation Plan for Longleaf Pine

which seeks to double the acreage of longleaf from four to eight million acres by 2025. Center staff has been actively engaged in this federal/state/private partnership since it began in 2007. This past year, the Center Education Coordinator served as Chair-elect of the Longleaf Partnership Council, rotating into the Chair position in October of 2014. Center staff also served in leadership roles in regional restoration and management planning initiatives with the Chattahoochee Fall Line Conservation Partnership, Apalachicola Regional Stewardship Alliance and the South Carolina Lowcountry Forest Conservation Partnership. Advisory visits were also made to other U.S. Forest Service and National Fish and Wildlife Foundation events.

Our Outreach staff provides leadership to the Georgia Prescribed Fire Council and to the national Coalition of Prescribed Fire Councils. We also support the national efforts that are related to policies for smoke management from wildland fires and the Southeast Regional Partnership for Planning and Sustainability, which helps coordinate regional decision making among agencies. This effort also promotes implementation of the Range-wide Conservation Plan for Longleaf Pine which necessitates more coordination of the use of prescribed fire. Center staff also served as part of the instructional team for the Georgia Forestry Commission's GA Certified Prescribed Burn Courses held across the state.

Center Outreach staff served on the leadership team of the Apalachicola-Chattahoochee-Flint (ACF) Stakeholders group. This group's mission is to achieve equitable water-sharing solutions among stakeholders that balance economic, ecological and social values, while ensuring sustainability for current and future generations. This group is currently working on collaborative development of a Sustainable Water Management Plan for the ACF Basin.

Conservation and Land Management

Stewardship of Ichauway

Many land management activities continued routinely as in prior years in the major areas of agriculture, wildlife management, hunting, roads and firebreaks, restoration and research support.

There were 12,450 acres burned by prescription in 2014, an acreage that is approximately 90% our annual target. As is typical, the majority of this acreage was burned in the spring and early summer (through May), especially given the dry summer conditions that limited ability to conduct growing season burns.

A pine pulpwood harvest was carried out in April and May over 344 acres of young longleaf plantations located in multiple locations on the property. The thinning in

ten plantations (approximately 100 acres) was conducted to implement a long-term research project and, while the harvest crew was on-site, additional plantation stands were thinned to meet operational management goals. We were able to thin many small, scattered plantations during the operation, and at the same time received an excellent price for the timber sold and generated a significant income.

Approximately 100 acres were treated for hardwood removal and cleanup by Jones Center personnel using our feller-buncher, primarily in the northern portion of the Turkey Woods. Herbicides were routinely applied to further restoration efforts in hardwood removal areas and around overgrown field edges, for control of exotic and invasive species, and for endangered species management (i.e., red-cockaded woodpecker-RCW). Some areas where hardwoods were removed and herbicides applied in previous years received targeted follow-up chemical and mechanical treatments (i.e., spot treatments) to provide additional control of hardwoods in areas under restoration.

Salvage operations were continued to utilize dead trees that present hazard situations (primarily along roads or firebreaks). Recently dead trees—typically from lightning strikes or blowdown—are harvested and taken to our sawmill located at the DuBignon complex; there they are cut to rough sizes and air-dried under covered storage. A major use of this wood in 2014 was for finishing the interior of the new auditorium/atrium expansion of the Research Building. We continue to use the wood as needed for onsite construction, repairs and renovations as well as for posts and poles for fences and sheds.

We continued to operationally herbicide Japanese climbing fern (*Lygodium japonicum*) in 2014, with spraying targeted on drainages, road edges and field edges with large infestations. Areas sprayed in previous years were revisited for follow-up spot treatments to insure control, and additional acres were treated for the first time. All treated areas are monitored to determine what plants first become established following the removal of *Lygodium* and to assess the need for any additional treatments.

Removal of feral hogs continued in 2014 with approximately ten individuals permanently removed. We maintain dogs trained specifically to run down and capture the hogs to enhance our ability to control this species. We are fortunate to not currently have a resident population of hogs on Ichauway, due in large part to this active program to capture or harass any individuals seen on the property.

Conservation Management Demonstration Area

In 2014 ongoing management activities, such as prescribed fire and agricultural field management, were carried out in the Conservation Management Demonstration Area (CMDA). The CMDA continues to be frequently visited during outreach events by

many different audiences, especially near an active RCW cluster located in the area, and several active research projects within the unit were supported by Conservation personnel (primarily through implementing specific burning prescriptions).

Apprenticeship (Intern) Program

Three Conservation Management Apprentices participated in the program during 2014. John-Michael McCormick (graduated December 2011 from Haywood Community College in NC) started the program in August of 2013, and in April 2014 moved to an assistant manager position at Dixie Plantation as an employee of Tall Timbers Research Station. Joseph Warden (Tennessee Technological University graduate in 2012), who started as an apprentice in December 2013, is still currently in the program and actively searching for a permanent position. Matthew Shurley, a 2014 wildlife management graduate from ABAC, became an apprentice in September 2014 and continues in the position in 2015.

Monitoring

Measurements were continued in the long-term forest monitoring (LTM) plots in 2014. Analysis of data continued, with the development of new summary reports and accessible links between the data base and the Center's GIS. An externally funded research project in the wildlife ecology and herpetology labs extensively used the data to develop and test habitat models, and other research personnel (scientists, technicians and graduate students) continued their use of the data for multiple internally funded projects. Researchers use the LTM information to both locate appropriate areas for research projects, as part of their analyses, and in the development of presentations and publications.

Spotlight and track counts were continued for monitoring mammal populations, especially the whitetail deer (WTD) population. The "spotlight" counts for WTD now use thermal cameras rather than high intensity lamps for detection because this technique requires fewer personnel and has a comparable detection rate. WTD population estimates continued to rise in 2014, thus a more aggressive harvest goal was set for the 2014-2015 whitetail hunting season. Quail covey counts were also conducted once again in the early fall to assess bobwhite population levels before the hunting season.

The Center continued our participation in Partners in Flight and other national bird inventory programs for bird community monitoring; sampling locations for these programs coincide (as much as possible) with the long-term forest monitoring plots.

Red-Cockaded Woodpecker (RCW) Recovery and Management

The red-cockaded woodpecker (RCW) restoration and management program had continued success in 2014. The population now has about 70 individuals, including six birds translocated from Apalachicola National Forest. The RCW are located in 26 active clusters, with twenty-one potential breeding groups and 32 chicks hatched. Two nests were located in natural cavities excavated by the birds, and "start" holes continue to increase around the active clusters.

As part of the long-term plan to increase the RCW population to 30 potential breeding groups, six new recruitment clusters were installed north of highway 91 and the translocated birds were released in three of these clusters. This activity represents the first expansion of the program north of the highway and near the Center headquarters. In addition to the expansion, a few clusters in the original restoration area (Tin Top and Whitehead portions of the property) that had never been active or did not have adequate territory were deactivated.

Budget Summary

The total budget for Ichauway, Inc. and the Joseph W. Jones Ecological Research Center for 2014 was \$9,696,037 of which \$9,000,000 was the board-approved internally funded budget and \$696,037 was funded from outside grants. The major source of funding for this budget was a grant from the Robert W. Woodruff Foundation in the amount of \$9,000,000.

All divisions of Ichauway operated within budget in 2014. Expenses for Research and support activities were \$3,544,127. Conservation and Land Management expenses were \$2,148,392. The expenses for Education and Outreach activities were \$544,635. Expenses for Administration, Maintenance and Operations were \$2,862,810, which also included overall Center operating expenses such as taxes, electric power and insurance costs.

APPENDIX

DIRECTOR'S 2014 ANNUAL REPORT to the TRUSTEES OF ICHAUWAY, INC.



photo by Steve Golladay

I	Publications, Presentations and Grants	pp. 19-31
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Publications, Presentations and Grants

"In Press" Publications

Becknell, J. M., A. R. Desai, M. C. Dietze, C. A. Schultz, G. Starr, P. A. Duffy, J. F. Franklin, A. Pourmokhtarian, J. Hall, P. C. Stoy, M. W. Binford, **L. R. Boring** and C. L. Staudhammer. Assessing interactions among changing climate, management, and disturbance in forests: a macrosystems approach. *BioScience* doi:10.1093/biosi/biu234.

Cherry, M. J., L. M. Conner and R. J. Warren. Effects of predator refugia and group dynamics on white-tailed deer vigilance in a longleaf pine savanna. *Behavioral Ecology*.

Dziadzio, M. C. and L. L. Smith. *Gopherus polyphemus* (Gopher Tortoise). Nest and Burrow Defense. *Herpetological Review*.

Long, A. K., D. D. Knapp, L. McCullough, L. L. Smith, L. M. Conner and R. A. McCleery. Southern toads alter their behaviour in response to red-imported fire ants. *Biological Invasions*.

Greenspan, S. E., E. P. Condon and L. L. Smith. Home range and habitat selection in the eastern box turtle (*Terrapene carolina carolina*) in a longleaf pine (*Pinus palustris*) reserve. *Herpetological Conservation and Biology*.

Howze, J. M. and L. L. Smith. Spatial ecology and habitat use of the Eastern coachwhip in a longleaf pine forest. *Southeastern Naturalist*.

Jack, S. B., N. A. Jansen and R. J. Mitchell. Crown expansion following thinning in naturally regenerated and planted longleaf pine. IN J.D. Haywood (ed.). *Proceedings of the 17th Biennial Southern Silvicultural Research Conference*, March 5-7, 2013, Shreveport, LA. Gen. Tech. Report. USDA, Forest Service, Southern Research Station, Asheville, North Carolina.

Nelson, M. A., M. J. Cherry, M. B. Howze, R. J. Warren and L. M. Conner. Coyote and bobcat predation on white-tailed deer fawns in a longleaf pine ecosystem in southwestern Georgia. *Proceedings of the Southeastern Association of Fish and Wildlife Agencies*.

Norton, T. A., K. Andrews and **L. L. Smith.** Field methods for capture, marking and tracking amphibians and reptiles. In: Mader, D. R. and S. Divers (Eds.). *Reptile Medicine and Surgery*. Elsevier Press.

Sterrett, S. C., A. J. Kaeser, R. A. Katz, L. L. Smith, J. C. Brock and J. C. Maerz. Spatial ecology of female Barbour's map turtles (*Graptemys barbouri*) in Ichawaynochaway Creek, Georgia. *Copeia*.

Streich, M. M., **A. R. Little**, M. J. Chamberlain, **L. M. Conner** and R. J. Warren. Habitat characteristics of eastern wild turkey nest and ground roost sites in two longleaf pine forests. *Proceedings of the Southeastern Association of Fish and Wildlife Agencies*.

Waters, M. N., **S. W. Golladay**, C. H. Patrick, J. M. Smoak and **S. D. Shivers**. The potential effects of river regulation and watershed land-use on sediment characteristics and lake primary producers in a large reservoir. *Hydrobiologia*.

Published Refereed Journal Articles and Books

Averill-Murray, R. C., L. J. Allison and **L. L. Smith**. 2014. Nesting and reproductive output among North American tortoises. Pages 110-117 in D. C. Rostal, E. D. McCoy, and H. R. Mushinsky (eds.). *Biology & Conservation of North American Tortoises*. University of California Press, Berkeley, California.

Boring, L. R., K. J. Elliott and W. K. Swank. 2014. Successional forest dynamics: 30 years following clearcutting. Pages 11-35 in W. T. Swank, and J. R. Webster (eds.). *Long-Term Response of a Forest Watershed Ecosystem: Clearcutting in the Southern Appalachians (The Long-Term Ecological Research Network)*. Oxford University Press, New York, New York.

Gleim, E. R., L. M. Conner, R. D. Bergaus, M. L. Levin, G. E. Zemstova and M. J. Yabsley. 2014. The phenology of ticks and the effects of long-term prescribed burning on tick population dynamics in southwestern Georgia and northwestern Florida. *PLoS ONE* 9(11): e112174. doi:10.1371/journal.pone.0112174.

Hiers, J. K., J. R. Walters, **R. J. Mitchell**, J. M. Varner, **L. M. Conner**, L. A. Blanc and J. Stowe. 2014. Ecological value of retaining pyrophytic oaks in longleaf pine ecosystems. *Journal of Wildlife Management* 78:383-393.

Little, A. R., M. M. Streich, M. J. Chamberlain, **L. M. Conner** and R. J. Warren. 2014. Eastern wild turkey reproductive ecology in frequently-burned longleaf pine savannas. *Forest Ecology and Management* 331:180-187.

McCormick, P. V. and R. E. Gible. 2014. Effects of soil chemistry on plant germination and growth in a northern Everglades peatland. *Wetlands* 34:979-988.

McGuire, J. L., L. L. Smith, C. Guyer, J. M. Lockhart, G. W. Lee and M. J. Yabsley. 2014. Surveillance for upper respiratory tract disease and *Mycoplasma* in free-ranging gopher tortoises (*Gopherus polyphemus*) in Georgia, USA. *Journal of Wildlife Diseases* 50:733-744.

McGuire, J. L., L. L. Smith, C. Guyer and M. J. Yabsley. 2014. Effects of mycoplasmal upper-respiratory-tract disease on movement and thermoregulatory behavior of gopher tortoises (*Gopherus polyphemus*) in Georgia, USA. *Journal of Wildlife Diseases* 50:745-756.

Mitchell, R. J., Y. Liu, J. J. O'Brien, K. J. Elliott, G. Starr, C. F. Miniati and J. K. Hiers. 2014. Future climate and fire interactions in the southeastern region of the United States. *Forest Ecology and Management* 327:316-326.

Norton, T. M., K. M. Andrews and **L. L. Smith.** 2014. Techniques for working with wild reptiles. Pages 310-340 in D. R. Mader and S. J. Divers (eds.). *Current Therapy in Reptile Medicine & Surgery*. First edition. Saunders/Elsevier, St. Louis, Missouri.

Rocca, M. E., C. F. Miniati and **R. J. Mitchell.** 2014. Introduction to the regional assessments: Climate change, wildfire, and forest ecosystem services in the USA. *Forest Ecology and Management* 327:265-268.

Starr, G., C. Staudhammer, H. W. Loescher, **R. J. Mitchell, A. Whelan, J. K. Hiers** and J. J. O'Brien. 2014. Time series analysis of forest carbon dynamics: Recovery of *Pinus palustris* physiology following a prescribed fire. *New Forests* 46:63-90.

Steen, D. A., C. J. W. McClure, J. C. Brock, D. C. Rudolph, J. B. Pierce, J. R. Lee, W. J. Humphries, B. B. Gregory, W. B. Sutton, L. L. Smith, D. L. Baxley, D. J. Stevenson and C. Guyer. 2014. Snake co-occurrence patterns are best explained by habitat and hypothesized effects of interspecific interactions. *Journal of Animal Ecology* 83:286-295.

Steen, D. A., C. J. W. McClure, W. B. Sutton, D. C. Rudolph, J. B. Pierce, J. R. Lee, L. L. Smith, B. B. Gregory, D. L. Baxley, D. J. Stevenson and C. Guyer. 2014. Copperheads are common when kingsnakes are not: Relationships between the abundances of a predator and one of their prey. *Herpetologica* 70:69-76.

Webster, J. R., E. F. Benfield, **S. W. Golladay** and M. E. McTammany. 2014. Recovery of particulate organic matter dynamics in a stream draining a logged watershed: a pressing situation. Pages 156-176 in W. T. Swank and J. R. Webster (eds.). *Long-Term Response of a Forest Watershed Ecosystem: Clearcutting in the Southern Appalachians (The Long-Term Ecological Research Network)*. Oxford University Press, New York, New York.

Whitfield, S. M., K. Reider, **S. Greenspan** and M. A. Donnelly. 2014. Litter dynamics regulate population densities in a declining terrestrial herpetofauna. *Copeia* 2014:454-461.

Young, G. B., S. W. Golladay, A. Covich and M. Blackmore. 2014. Nutrient enrichment affects immature mosquito abundance and species composition in field-based mesocosms in the Coastal Plain of Georgia. *Environmental Entomology* 43:1-8.

Young, G. B., S. W. Golladay, A. Covich and M. Blackmore. 2014. Stable isotope analysis of larval mosquito diets in agricultural wetlands in the coastal plain of Georgia, U.S.A. *Journal of Vector Ecology* 39:288-297.

Proceedings, Outreach and Other Publications

Golladay, S. W., D. W. Hicks, N. Smith and B. Clayton. 2014. Stream habitat and mussel populations adjacent to AAWCM sites in the lower Flint River Basin. Project report submitted to The Nature Conservancy.

King, R. L., E. M. Schlimm and L. L. Smith. 2014. *Chelydra serpentina* (Snapping Turtle). Winter drought refugia. *Herpetological Review* 45:482.

Little, A. R., S. Demarias, K. L. Gee, S. L. Webb, S. M. Riffell, J. A. Gaskamp and J. L. Belant. 2014. Does human predation risk affect harvest susceptibility of white-tailed deer during hunting season? *Wildlife Society Bulletin* 38:797-805.

McIntyre, R. K., J. B. Grand, R. White and R. R. Wilson. 2014. Wildlife responses to longleaf pine habitat structure restoration. Page 235 in CEER: Proceedings of the Conference on Ecological and Ecological Restoration, Elevating the Science and Practice of Restoration: a Collaborative Effort of NCER and SER, July 28- August 1, 2014, New Orleans, Louisiana. University of Florida, IFAS, Gainesville, Florida.

McIntyre, R. K. 2014. Longleaf Pine Restoration Assessment: Conservation Outcomes and Performance Metrics. Joseph W. Jones Ecological Research Center, Newton, Georgia, , and National Fish and Wildlife Foundation. Final Report. Contract nr NFWF 1903.12.034011. 92 p.

McIntyre, R. K. and B. B. McCall. 2014. Longleaf Pine Economics: Large-Acreage Landowner Perspectives and Opportunities. Joseph W. Jones Ecological Research Center, Newton, Georgia, and National Fish and Wildlife Foundation, June 20, 2014. Contract nr NFWF 1903.13.040686. 63 p.

McGuire, J. L., S. M. Hernandez, L. L. Smith and M. J. Yabsley. 2014. Safety and utility of an anesthetic protocol for the collection of biological samples from gopher tortoises. *Wildlife Society Bulletin* 38:43-50.

Ruttinger, J. A., **D. S. Colbert**, R. J. Warren, **L. M. Conner** and M. J. Chamberlain. 2014. Using thermal imaging cameras with radiotelemetry to locate roost sites of male wild turkeys. *Wildlife Society Bulletin* 38:884-886.

Smith, N. D. and **S. W. Golladay**. 2014. Curculionidae (Coleoptera) species within geographically isolated wetlands of the Gulf Coastal Plain in southwestern Georgia. *Transactions of the American Entomological Society* 140: 237-244.

Meeting Presentations, Posters and Abstracts

Boston, J. E., M. N. Waters and **S. W. Golladay**. 2014. Alterations to biogeochemical processes and sediment transport by the invasive macrophyte, *Hydrilla verticillata*, in a large, shallow reservoir. Joint Aquatic Sciences Meeting, Portland, Oregon. Poster presentation.

Breland, S., L. K. Kirkman and C. R. Carroll. 2014. Bee community composition and vegetation across a suite of restoration conditions in a longleaf pine savanna. Ecological Society of America, Sacramento, California. Poster presentation.

Cherry, M. J., R. J. Warren and **L. M. Conner**. 2014. Responding to risk: Coyote influence. Columbia College Science, Columbia, South Carolina. Invited Seminar.

Cherry, M. J., R. J. Warren and **L. M. Conner**. 2014. Coyotes, deer and behaviorally mediated trophic cascades in a fire dependent ecosystem. Gordon Research Conference, Predator Prey Interactions, Ventura, California. Poster presentation.

Cherry, M. J., R. J. Warren and **L. M. Conner**. 2014. Low-cost GPS solution for studying spatial ecology of white-tailed deer fawns. Southeast Deer Study Group Meeting, Athens, Georgia. Oral presentation.

Cherry, M. J., R. J. Warren and **L. M. Conner**. 2014. Coyote predation risk and white-tailed deer foraging behavior. Southeast Deer Study Group Meeting, Athens, Georgia. 2nd place oral student presentation.

Cherry, M. J., R. J. Warren and **L. M. Conner**. 2014. Predation risk and white-tailed deer foraging behavior. Warnell Graduate Research Symposium, Athens, Georgia. 2nd place oral Ph.D. student presentation.

Cherry, M. J., R. J. Warren and **L. M. Conner**. 2014. Food web dynamics and oak recruitment in longleaf pine savanna. 6th Annual Virginia Tech Forest Resources and Environmental Conservation Graduate Symposium, Blacksburg, Virginia. 2nd place oral student presentation.

Cherry, M. J., R. J. Warren and L. M. Conner. 2014. Trait-mediated indirect interaction between coyote and white-tailed deer. Southeast Deer Study Group Meeting, Athens, Georgia. Oral presentation.

Conner, L. M., M. J. Cherry and R. J. Warren. 2014. Non-consumptive effects of coyotes on deer. Southeastern Deer Study Group Meeting, Athens, Georgia. Oral presentation.

Conner, L. M., M. J. Cherry, B. T. Rutledge, C. H. Killmaster, G. Morris and L. L. Smith. 2014. Is it time to consider predator exclusion as a management option for increasing white-tailed deer recruitment? The Wildlife Society, Workshop on Predator Management, Pittsburgh, Pennsylvania. Oral presentation.

Conner, L. M., M. J. Cherry, B. T. Rutledge, C. H. Killmaster, G. Morris and L. L. Smith. 2014. Is it time to consider predator exclusion as a management option for increasing white-tailed deer recruitment? The Southeastern Association of Fish and Wildlife Agencies, Destin, Florida. Oral presentation.

Conner, L. M. 2014. Can predator exclosures help mitigate fawn predation by coyotes. Deer Management Research Group, Hamilton, Georgia. Oral presentation.

Giencke, L., L. K. Kirkman and C. Denhoff. 2014. Does provenance matter? Assessing ecotypal variation to promote restoration success. Ecological Society of America, Sacramento, California. Poster presentation.

Giencke, L. 2014. Georgia Coastal Plain: Ecosystems and restoration. Coastal Plain Chapter of the Georgia Native Plant Society, Alapaha, Georgia. Invited oral presentation.

Howze, J. M. and L. L. Smith. 2014. Introduction to line transect distance sampling: Survey analysis. Florida Fish and Wildlife Commission Gopher Tortoise Survey and Monitoring Workshop, Keystone Heights, Florida. Oral presentation.

Howze, J. M., L. L. Smith, L. M. Conner and G. Morris. 2014. Snake activity patterns within the longleaf pine forest. Georgia Wildlife Society, Tifton, Georgia. Invited oral presentation.

Howze, J. M. and L. L. Smith. 2014. Herpetology research at the Jones Center. ABAC Wildlife Society, Tifton, Georgia. Invited oral presentation.

Howze, J. M. 2014. Venomous snakes of Southwest Georgia. Phoebe Putney Memorial and Flint RiverQuarium, Albany, Georgia. Invited oral presentation.

Howze, J. M. 2014. Venomous snakes of Southwest Georgia. Lions Club, Edison, Georgia. Invited oral presentation.

Howze, J. M. 2014. Bat Ecology 101. The Sertoma Club, Albany, Georgia. Invited oral presentation.

Howze, J. M., L. L. Smith, L. M. Conner and G. Morris. 2014. Snake activity patterns within the longleaf pine forest. American Society of Ichthyologists and Herpetologists, Chattanooga, Tennessee. Oral presentation.

Hromada, S. J., **A. K. Long, L. L. Smith, L. M. Conner** and R. A. McCleery. 2014. The effect of red-imported fire ant management on the diet of southern toads. 36th Annual Gopher Tortoise Meeting, Albany, Georgia. Poster presentation.

Jack, S. B. 2014. Underplanting for species conversion and restoration: A southern example and session overview. Society of American Foresters Annual Meeting, Salt Lake City, Utah. Oral presentation.

King, R. L., L. L. Smith and A. P. Covich. 2014. Spatial ecology and wetland habitat selection of common snapping turtles (*Chelydra serpentina*) and yellow-bellied sliders (*Trachemys scripta*) in a longleaf pine ecosystem. Joint Meeting of the American Society of Ichthyologists and Herpetologists, Chattanooga, Tennessee. Oral presentation.

Kirkman, L. K. 2014. Restoration and conservation management of the longleaf pine ecosystem: Understanding the pieces of the puzzle. Ecological Society of America, Sacramento, California. Oral presentation.

Long, A. K., L. L. Smith, L. M. Conner and R. A. McCleery. 2014. Population level effects of invasive fire ants on cotton rats and eastern fence lizards. The Wildlife Society Meeting, Pittsburgh, Pennsylvania. 1st place oral presentation.

Long, A. K., L. L. Smith, L. M. Conner and R. A. McCleery. 2014. Population level effects of invasive fire ants on cotton rats and eastern fence lizards. Georgia Chapter of the Wildlife Society Meeting, Tifton, Georgia. 1st place oral presentation.

Long, A. K., L. L. Smith, L. M. Conner and R. A. McCleery. 2014. The effect of red-imported fire ants on eastern fence lizard recruitment and survival. Joint Meeting of Ichthyologists and Herpetologists, Chattanooga, Tennessee. 4th place oral presentation.

Long, A. K., L. L. Smith, L. M. Conner and R. A. McCleery. 2014. The effect of red-imported fire ants on eastern fence lizard recruitment and survival. Florida Chapter of the Wildlife Society Meeting, Safety Harbor, Florida. Oral presentation.

Long, A. K., L. L. Smith, L. M. Conner and R. A. McCleery. 2014. The effect of red-imported fire ants on eastern fence lizard recruitment and survival. Gainesville Herpetological Meeting, Gainesville, Florida. Honorable mention oral presentation.

Marzolf, N., A. P. Covich, S. W. Golladay, P. V. McCormick and S. Wilde. 2014. Quantifying effects of invasive apple snails (*Pomacea maculata*) in a large reservoir: An outline for research. Florida Lake Management Society Annual Technical Symposium, Stuart, Florida. Awarded best graduate student poster presentation.

Marzolf, Nick. 2014. Faster than a swimming snail: Understanding the ecological impacts of apple snails in Lake Seminole. Odum School of Ecology Graduate Student Symposium, Athens, Georgia. Oral presentation.

McCormick, P. V., L. C. Cowart and S. W. Golladay. 2014. Effects of reduced stream flows on instream habitat in the Lower Flint River Basin. Joint Aquatic Sciences Meeting, Portland, Oregon. Oral presentation.

McCormick, P. V., L. C. Cowart and S. W. Golladay. 2014. Effects of reduced stream flows on instream habitat in the Lower Flint River Basin. University of Florida Water Institute Symposium, Gainesville, Florida. Oral presentation.

McIntyre, R. K. 2014. NFWF Large Landowner Economics Workshop. Longleaf Partnership Council, Biloxi, Mississippi. Invited oral presentation.

McIntyre, R. K. 2014. Partner showcase: Joseph W. Jones Ecological Research Center. Longleaf Partnership Council, Biloxi, Mississippi. Oral presentation.

Melvin, M. A. 2014. Prescribed fire: How to get started. Longleaf Conference and Eastern Native Grass Symposium, Mobile, Alabama. Oral presentation.

Patrick, C. H., M. N. Waters and **S. W. Golladay.** 2014. The ecological role of the invasive clam, *Corbicula fluminea*, in a shallow reservoir system: Lake Seminole, Georgia. Joint Aquatic Sciences Meeting, Portland, Oregon. Poster presentation.

Shivers, S. D., S. W. Golladay and A. P. Covich. 2014. Effects of multiple invasive species on nutrient cycling within a shallow subtropical reservoir, Lake Seminole, Georgia. Odum School of Ecology Graduate Student Symposium, Athens, Georgia. Oral presentation.

Shivers, S. D., S. W. Golladay and A. P. Covich. 2014. Effects of invasive species on nutrient cycling within a shallow subtropical reservoir, Lake Seminole, Georgia. University of Georgia Graduate Education Advancement Board Spring Meeting, Albany, Georgia. Oral presentation.

Smith, C. R., **P. V. McCormick, S. W. Golladay and A. P. Covich.** 2014. Influence of stream intermittency on aquatic invertebrate assemblages in the lower Flint River Basin. University of Florida Water Institute Symposium, Gainesville, Florida. Oral presentation.

Smith, C. R., **P. V. McCormick**, **S. W. Golladay** and A. P. Covich. 2014. Influence of stream intermittency on aquatic invertebrate assemblages in the lower Flint River Basin. Joint Aquatic Sciences Meeting, Portland, Oregon. Oral presentation.

Smith, L. L. 2014. Gopher tortoise demography and population structure. 2nd Gopher Tortoise Minimum Viable Population Workshop, Andalusia, Alabama. Oral presentation.

Smith, L. L., S. Greenspan and E. P. Condon. 2014. Home range and habitat selection in the eastern box turtle (*Terrapene carolina carolina*) in a longleaf pine forest. Joint Meeting of Ichthyologists and Herpetologists, Chattanooga, Tennessee. Oral presentation.

Smith, N. and **S. W. Golladay**. 2014. Effects of a multi-year drought on stream flows and freshwater mussels in tributary streams of the lower Flint River, Georgia. University of Florida Water Institute Symposium, Gainesville, Florida. Oral presentation.

Sutter, R., **J. K. Hiers** and **L. K. Kirkman**. 2014. Ecosystem restoration over space and time: An example from the restoration of longleaf pine sandhills on Eglin Air Force Base, Florida. Conference on Ecological and Ecosystem Restoration, New Orleans, Louisiana. Oral presentation.

Taylor R. S., L. L. Smith and **J. M. Howze**. 2014. Direct effects of heavy equipment use on gopher tortoise burrows. Longleaf Alliance, Mobile, Alabama. Poster presentation.

Taylor, R. S., L. R. Boring, L. M. Conner, S. B. Jack, L. K. Kirkman and **L. L. Smith**. Effects of longleaf pine restoration on key soil chemical processes. Soil Science Society of America International Meeting, Long Beach, California. Poster presentation.

Turner, K. L., E. F. Abernethy, O. E. Rhodes, Jr. and **J. C. Beasley**. 2014. The effects of carcass size, habitat type, and season on scavenging communities in the coastal plain of the Southeast. Warnell Graduate Student Association Annual Symposium, Athens, Georgia. 2nd place poster presentation.

Waters, M. N., **S. W. Golladay**, A. P. Covich, **S. Shivers**, J. M. Smoak, J. Boston and C. H. Patrick. 2014. Land use, fragmentation and biological invasions influence benthic and pelagic biogeochemical processes in a large and shallow reservoir: Lake Seminole, Georgia. Joint Aquatic Sciences Meeting, Portland, Oregon. Oral presentation.

Professional Seminars, Guest Lectures and Special Presentations

Conner, L. M. 2014. Predation in the fire forest: a long-term mesopredator exclosure experiment. Auburn University, Auburn, Alabama. Invited seminar.

Jack, S. B. and S. D. Pecot. 2014. Regeneration dynamics in longleaf pine: Challenging conventional wisdom to improve management. Ecology of Frequent Fire Ecosystems Symposium, 99th Ecological Society of America Annual Meeting, Sacramento, California. Invited oral presentation.

Jack, S. B. 2014. Management and restoration of longleaf pine at Ichauway: Concepts to application. Departments of Forestry and Fisheries and Wildlife, University of Missouri, Columbia, Missouri. Invited seminar.

Jack, S. B. 2014. Underplanting for species conversion and restoration: The Ichauway example. Longleaf Alliance Biennial Conference, Mobile, Alabama. Invited oral presentation.

Kirkman, L. K. 2014. Restoration and conservation management of the longleaf pine ecosystem: Understanding pieces of the puzzle. Ecological Society of America Annual Meeting, Sacramento, California. Invited symposium presentation.

Kirkman, L. K. 2014. Restoration challenges in the longleaf pine ecosystem: Using an adaptive management approach. School of Public and Environmental Affairs, Indiana University, Bloomington, Indiana. Invited seminar.

Kirkman, L. K. 2014. The Natural Communities of Georgia. The Georgia Conservancy, Moultrie, Georgia Chapter. Invited oral presentation and book signing.

Kirkman, L. K. 2014. The longleaf pine ecosystem: Ecology and restoration of the fire forest. Conservation Ecology Course, Odum School of Ecology, University of Georgia, Athens, Georgia. Invited seminar.

McIntyre, R. K. and S. B. Jack. Timber and wildlife ecology research update from the Jones Center. Southeast Regional Manager and Landowner Conference, Valdosta, Georgia. Invited oral presentation.

Externally Funded Projects

Boring, L. R., J. F. Franklin and R. J. Mitchell. Building forest management into Earth system modeling: scaling from stand to continent. The National Science Foundation. June 01, 2013 – May 31, 2015. \$170,872. Received in 2014, \$85,663.

Boring, L.R. and G. Starr. Long-term ecosystem inventories: Assessing availability and scalability of C and N data for ecosystem models to inform scope of future proposals. USDA Forest Service. July 02, 2014 – September 30, 2015. \$65,701. Received in 2014, \$17,919.

Conner, L. M. Breeding bird response to longleaf pine restoration. National Wild Turkey Federation. February 22, 2011 – December 31, 2016. \$35,700. Received in 2014, \$11,900.

Conner, L. M. Prescribed fire and ecology of turkeys, coyotes and deer. Georgia Department of Natural Resources, subcontracted through University of Georgia. January 01, 2012 – December 31, 2014. \$91,466. Received in 2014, \$5,311.

Conner, L. M. and K. Miller. Gray fox spatial movement tracking. Department of Defense. September 25, 2013 – September 24, 2016. \$86,813. Received in 2014, \$61,600.

Conner, L. M. and **L. L. Smith.** Using wildlife habitat models to evaluate management endpoints for open pine woodland and savanna. U.S. Fish and Wildlife Service. March 15, 2014 – March 15, 2015. \$132,104. Received in 2014, \$44,489.

Conner, L. M. and **K. Miller.** Development and evaluation of an unbaited camera survey technique for estimating relative abundance and demographic parameters of white-tailed deer. U.S. Fish and Wildlife Service, subcontracted through University of Georgia. July 01, 2014 – September 30, 2018. \$145,140. Received in 2014, \$14,926.

Conner, L.M., M. J. Cherry, R. Chandler and K. Miller. Effects of hydrology, hunting, and predation on white-tailed deer dynamics in south Florida. Florida Fish and Wildlife Conservation Commission, subcontracted through University of Georgia. September 29, 2014 – December 31, 2015. \$249,449. Received in 2014, \$20,919.

Conner, L.M. and M. Chamberlin. Movement ecology of female wild turkeys during nesting and brooding seasons on Silver Lake Wildlife Management Area. Georgia Department of Natural Resources, subcontracted through University of Georgia. August 01, 2014 – July 31, 2017. \$153,400. Received in 2014, \$1,181.

Golladay, S. W. Instream assessment of stream habitat and mussel populations adjacent to Advanced Agricultural Water Conservation Measures (AAWCM) sites in the Lower Flint River Basin. The Nature Conservancy. May 01, 2012 – September 30, 2014. \$59,687. Received in 2014, \$6,899.

Golladay, S. W. and R. J. Mitchell. A workshop on conservation and natural resource management in an uncertain future: Using the southeastern U.S. as a model for managing change. National Science Foundation. August 01, 2012 - July 31, 2015. \$49,000. Did not receive funds in 2014.

Golladay, S. W. and R. J. Mitchell. A workshop on conservation and natural resource management in an uncertain future: Using the southeastern U.S. as a model for managing change. USDA Forest Service. July 31, 2012 - May 31, 2014. \$15,000. Received in 2014, \$4,863.

Golladay, S. W. and M. Waters. Dominant invasive species in Lake Seminole, GA. U.S. Fish and Wildlife Service subcontracted through Valdosta State University. September 01, 2014 – August 31, 2015. \$6,145. Did not receive funds in 2014.

Kirkman, L. K. Evaluation of longleaf pine undercover ecotype seed sources. R. Howard Dobbs, Jr. Foundation. November 02, 2012 – no established end date. \$65,000. Received in 2014, \$9,618.

Kirkman, L. K. and L. L. Smith. Isolated wetlands workshop. Environmental Protection Agency. September 01, 2013 – May 31, 2015. \$14,000. Received in 2014, \$2,622.

Kirkman, L. K., L. M. Conner and R. K. McIntyre. Longleaf pine ecosystem conservation III. National Fish and Wildlife Foundation. September 1, 2007 – December 31, 2014. \$196,500. Received in 2014, \$86,507.

Kirkman, L. K. and M. J. Kaeser. Population survey and analysis for federally listed or petitioned plants and the threatened gulf sturgeon. U.S. Fish and Wildlife Service. February 01, 2012 - January 31, 2015. \$85,000. Received in 2014, \$11,300.

McIntyre, R. K. Longleaf economics workshop. National Fish and Wildlife Foundation. June 01, 2013 - September 30, 2014. \$50,320. Received in 2014, \$29,105.

McIntyre, R. K. and S. B. Jack. Collaborative management and restoration of longleaf pine in lowcountry South Carolina. The Nature Conservancy. March 08, 2013 – July 31, 2014. \$24,375. Received in 2014, \$12,375.

McIntyre, R. K. and S. B. Jack. Collaborative management and restoration of longleaf pine in lowcountry South Carolina. The Nature Conservancy. December 01, 2014 – August 31, 2016. \$16,875. Did not receive funds in 2014.

Mitchell, R. J., L. K. Kirkman, L. M. Conner, L. L. Smith, J. Priddy, P. Yates, M. C. Mack, J. R. Walters and R. D. Sutter. Developing dynamic reference models and a decision support framework for southeastern ecosystems: An integrated approach. Strategic Environmental Research and Development Program. March 26, 2009 – May 31, 2015. \$1,351,138. Received in 2014, \$64,761.

Smith, L. L. Gopher tortoise surveys and population evaluation. U.S. Fish and Wildlife Service. August 01, 2012 - September 30, 2014. \$40,000. Received in 2014, \$12,092.

Smith, L. L. Gopher tortoise surveys and population evaluation. Florida Fish and Wildlife Conservation Commission. January 30, 2014 - June 30, 2016. \$300,000. Received in 2014, \$148,032.

Smith, L. L. Surveys of Barbour's map turtle and alligator snapping turtle in Georgia. Georgia Department of Natural Resources. October 31, 2013 – August 31, 2015. \$64,917. Received in 2014, \$43,955.

Education and Outreach Program On-site Activities

University Class Visits

University of Georgia. A two-day field tour focusing on herpetology. (17)

University of Georgia. A week-long Maymester short course in fire ecology. (16)

University of Florida. A two-day field experience focusing on longleaf pine management and restoration. (29)

University of the South. A two-day field tour including an overview of the longleaf pine ecosystem, longleaf pine management and restoration and endangered species. (18)

Berry College. A three-day field experience including an overview of the longleaf pine ecosystem, rare and endangered species, wetland and plant diversity, fire management at Ichauway and various restoration and research projects. (13)

Abraham Baldwin Agricultural College. A one-day field tour focusing on fire ecology. (34)

University of Georgia. A week-long Maymester short course in wildlife ecology. (12)

Universities of Georgia and Florida. A week-long Maymester short course on Coastal Plain ecosystem ecology and conservation. (12)

Arkansas Tech University. A two-day field tour focusing on forest ecology. (17)

University of Georgia. A two-day field experience focusing on mammalogy. (22)

Natural Resource Professionals and Conservation Groups

Longleaf Economics Workshop. A three-day workshop to explore barriers and opportunities for large landowners to invest in longleaf pine establishment and management. (22)

L-A-D Foundation. A one-day field tour for Foundation Board and staff focusing on the longleaf pine ecosystem's management and restoration. (8)

US Army & Corps of Engineers. A one-day visit by the land management (22,000 acres) staff leads from Lake Seminole. (2)

Golden Triangle Research, Conservation, and Development Council. A one-day visit from new personnel to familiarize themselves with Center. (2)

Integrating an Uncertain Future into Conservation Management and Restoration. A three-day workshop to explore how to integrate uncertain futures into management and restoration. (19)

National Prescribed Fire Training Center. A one-day field tour focusing on prescribed fire use in the southeastern U.S. (16)

Ecological Forestry Workshop. A three-day workshop focused on longleaf pine ecology, restoration and management, with a specific focus on application of the Stoddard-Neel system of forest management. (16)

Georgia DNR Tortoise Modeling. A three-day meeting to begin development of a modeling framework to inform conservation decision making by Georgia DNR for gopher tortoises. (18)

Panther Prey Meeting. A one-day meeting to discuss research design and logistics associated with the South Florida white-tailed deer research project. (7)

American Forestry Foundation (AFF). A one-day visit from AFF staff to learn about the Center. (1)

National Institute for Food and Agriculture. A two-day meeting comparing water resource issues in Florida and Georgia to develop information needs for research. (9)

Creeks to Coast Educator Workshop. A one-day field tour part of a larger program to expose educators to research and water resources in the Apalachicola Chattahoochee Flint Basin. (20)

U.S. Forest Service Southern Research Station. A three-day meeting with the new Longleaf Pine Project Leader from SRS. (2)

Institute for Georgia Environmental Leadership (IGEL). A one-day field tour focusing on prescribed fire and water resources issues. (41)

Freshwater Mussel Workshop. A four-day training workshop focusing on field survey techniques and identification of freshwater mussels. (24)

Adopt-A-Stream Board. A three-day meeting and field tour. (8)

Georgia Forestry Commission. A one-day field tour with the new District Ranger. (1)

Georgia Prescribed Fire Council (GPFC). A three-day visit with speakers for the Annual GPFC Meeting. (2)

Apalachicola Regional Stewardship Alliance (ARSA). A one-day meeting and field tour for land managers from U.S. Forest Service, U.S. Fish and Wildlife Service, Florida Forest Service, Florida Fish and Wildlife Commission and Florida Chapter of the Nature Conservancy. (34)

Natural Resources Conservation Service Native Warm Season Grasses Workshop. A three-day workshop focusing on native grasses identification. (20)

Gopher Tortoise Council (GTC) Conference. A one-day field tour for GTC Conference attendees. (4)

Eastern Indigo Snake Reintroduction Meeting. A two-day meeting focusing on the recovery of the Eastern Indigo Snake. (22)

Gopher Tortoise Survey Training. A three-day training on gopher tortoise line transect distance sampling. (9)

Alligator Workshop. A two-day workshop regarding decision support for alligator harvest programs in the Southeast. (19)

Internal Prescribed Fire Course. A two-day course focusing on prescribed fire for Jones Center employees and graduate students, including execution of a prescribed burn. (14)

Mike Dueitt. A one-day meeting with the Director of the National Prescribed Fire Training Center. (1)

Georgia River Network Fall Float on the Flint. A paddle event which included a stop at Ichauway, where Center staff gave overviews of the longleaf pine ecosystem and aquatic system. (175)

Public Relations

Public Broadcasting Service. A five-day visit by a videographer filming gopher tortoises for a program focusing on "ecological engineers." (1)

Southern Documentary Project. A one- and two-day visit by a videographer from the University of Mississippi Center for Southern Documentaries filming for a documentary on longleaf pine. (1)

Red Sky Productions. A one-day meeting to discuss filming opportunities for a documentary project on longleaf pine. (2)

Education and Outreach Program Off-site Activities

Regional Partnerships and Advisement

Longleaf Partnership Council

The Center was a founding member of this regional partnership of federal, state, non-governmental organization and private groups working to implement the 2009 Range-wide Conservation Plan for Longleaf Pine, which seeks to double the acreage of longleaf from 4 to 8 million acres by 2025. Kevin McIntyre has worked with this effort since it began in 2007 and is currently serving as Chair of the Council for 2014-2015, as well as serving on several subcommittees of the Council. He also represents the Council on the Federal Coordinating Committee for Longleaf Pine.

Lowcountry Forest Conservation Partnership

Kevin McIntyre and Steve Jack were funded through a grant from The Nature Conservancy (TNC) to provide advice and develop longleaf restoration plans for approximately 2000 acres owned by TNC, as well as other private lands, around the Francis Marion National Forest. This effort has evolved into a regional longleaf partnership that serves as a local implementation team for the Range-wide Conservation Plan for Longleaf Pine.

Apalachicola Regional Stewardship Alliance (ARSA)

Kevin McIntyre serves on the ARSA, a regional partnership for longleaf restoration in a million-acre focus area centered around the Apalachicola National Forest and St. Marks National Wildlife Refuge, extending into nearby Southwest Georgia. This group serves as a local implementation team for the Range-wide Conservation Plan for Longleaf Pine.

Chattahoochee Fall Line Conservation Partnership (CFLCP)

Steve Jack served as a member of the steering committee for the CFLCP, a regional partnership for longleaf restoration around the Ft. Benning/Fall Line Sandhills area of western Georgia. This group serves as a local implementation team for the Range-wide Conservation Plan for Longleaf Pine.

National Fish and Wildlife Foundation (NFWF) Longleaf Economics Project

Kevin McIntyre co-led, and Steve Jack participated in, a grant-funded collaborative effort with the NFWF to synthesize current knowledge of longleaf pine economics and how to better engage large-acreage private landowners in longleaf pine restoration and management. The centerpiece of this project was a three-day workshop held at Ichauway. A report from the workshop was completed and submitted in 2014.

Coalition of Prescribed Fire Councils

Mark Melvin serves as Governing Board Member, whose overarching goal is to create one voice to assist fire practitioners, policymakers, regulators and citizens with issues surrounding prescribed fire use.

Georgia Prescribed Fire Council (GPFC)

The GPFC is a diverse group of stakeholders collaborating to protect the right, to encourage the use of and to promote public understanding of prescribed fire in Georgia. Mark Melvin serves as permanent Vice-Chair for this group and coordinates the annual meeting.

Southern Fire Exchange (SFE)

The SFE is a regional program for fire science delivery in the Southeast, funded by the Joint Fire Science Program. The SFE consolidates southern fire information and provides new ways for the fire community to interact and learn from one another. Mark Melvin serves as Advisory Board Chair.

National Wildfire Coordination Group (NWCG)

The Fire Use Subcommittee reviews and updates NWCG prescribed fire training standards and policy. Mark Melvin serves as liaison on the Fire Use Subcommittee.

NWCG Smoke Committee

The revision of NWCG's Smoke Management Guide encompasses broad training and standards, as well as policy, related to managing smoke from wildland fires. Mark Melvin serves as a member of the Smoke Management Guide Review Team.

Wildland Fire Cohesive Strategy: Southeast Regional Committee

This group provides executive leadership, oversight and guidance within their respective region for completing the tasks assigned by the Wildland Fire Executive Council during Phases II and III of the Cohesive Strategy. Mark Melvin serves as Southeast Regional Committee Member.

Southeast Regional Partnership for Planning and Sustainability (SERPPAS)

The Southeast Regional Partnership for Planning and Sustainability (SERPPAS) is a six-state partnership comprised of state and federal agencies that promotes collaboration in making resource use decisions supporting conservation of natural resources, working lands, and national defense. Mark Melvin serves on the Air Quality Subcommittee and Prescribed Fire Work Group, working to develop creative solutions that address smoke management for prescribed fire and increase burning while complying with state air quality regulations. The Prescribed Fire Work Group also works collaboratively with the Longleaf Partnership Council to implement the Range-wide Conservation Plan for Longleaf Pine by developing strategies, garnering support and implementing programs that will double 'region-wide longleaf' burning by year 2025.

Georgia Forestry Commission

The Georgia Forestry Commission hosts and administers a certified burn manager course. These classes are conducted at multiple locations annually, and Mark Melvin serves as a class instructor.

Georgia Adopt A Stream

Steve Golladay served on the board of directors for Georgia Adopt A Stream (AAS). Among the priority activities of the group were refining the statewide water quality database, available online. Georgia AAS also started a program of data collection for Paddle Georgia and other river education efforts.

Rivers Alive Cleanup

Lora Smith, Jennifer Howze and Kay Kirkman continue to organize and lead river clean-up days on the Flint River during weekends, largely as volunteer work in Bainbridge, Baker County and Albany, Georgia. Steve Golladay is on the Advisory Board for Keep Bainbridge-Decatur County Beautiful.

ACF Stakeholders

During 2014, Woody Hicks represented the Center as a technical advisor on the ACF Stakeholders and served on the Executive Committee of the Governing Board. He also chaired the Data Needs and Sustainability work group, the Apalachicola Bay study group, and served as technical liaison on the Technical Oversight Committee. These committees and work groups have had responsibility to develop external contracts with private consultants to develop a Sustainable Water Management which includes recommendations specific to improving the aquatic habitat that supports oysters in the Apalachicola Bay. The Technical Oversight Committee has had the responsibility for providing contractor guidance and promoting governing board consensus throughout the data collection and synthesis process during the technical phases of the development of the water plan.

Georgia Water Resources Conference

The Center is a sponsor of the 2015 Georgia Water Resources Conference. During 2014, Steve Golladay served on the program committee for the conference. The conference will be held in Athens, Georgia in April 2015.

Georgia Forestry Commission

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Rivers Alive Cleanup

Lora Smith, Jennifer Howze and Kay Kirkman continue to organize and lead river clean-up days on the Flint River during weekends, largely as volunteer work in Bainbridge, Baker County and Albany, Georgia.

Director's Report to the Trustees of Ichauway, Inc.

April 7, 2015

4H₂O Water Education Day

Steve Golladay and Nathalie Smith participated in a 4-H water education event hosted by the University of Georgia College of Agriculture at Stripling Irrigation Park. This is public relations outreach aimed at teachers and school children.

Graduate Students

Graduated 2014

Coyote foraging behavior, density dependent spatial distribution, and impact on white-tailed deer recruitment in southwestern Georgia.
(University of Georgia, Ph.D., L. M. Conner) Michael Cherry

Spatial patterns of wetland use of freshwater turtles in coastal plain of Georgia.
(University of Georgia, M.S., L. L. Smith) Rachel King

A telemetric study on the ecology of the southeastern pocket gopher (*Geomys pinetis*) in southwest Georgia.
(University of Georgia, M.S., L. M. Conner) Ashley Warren

Current 2014 Projects

Bee community and vegetation across a suite of restoration conditions in a fire-maintained longleaf pine savanna.
(University of Georgia, M.S., L. K. Kirkman) Sabrie Breland

Isolated wetland mapping, connectivity assessment and water quality in the Dougherty plain of Georgia.
(University of Georgia, Ph.D., L. K. Kirkman) James Deemy

Seasonal movements and habitat selection of gray foxes relative to prescribed fire and hardwood removal.
(University of Georgia, M.S., L. M. Conner) Nicholas Deuel

Relationship between stream flow and periphyton growth
(University of Georgia, M.S., P. V. McCormick) David Diaz

The influence of habitat variables on nest survival in the gopher tortoise.
(University of Georgia, M.S., L. L. Smith) Michelina D'ziadzio

Development and evaluation of a camera survey technique for estimating population parameters of white-tailed deer (*Odocoileus virginianus*).
(University of Georgia, Ph.D., L. M. Conner) James Johnson

Effects of anthropogenic factors on raccoon ecology in a longleaf pine-dominated landscape. (University of Tennessee, M.S., L. M. Conner)	Brian Kirby
Food and fear: Using terrestrial mammals to decouple the drivers of habitat selection. (University of Florida, Ph.D., L. M. Conner)	Jessica Laskowski
Linking predation risk and fitness measurements to sustainability of eastern wild turkeys in a longleaf pine ecosystem: a habitat-based approach. (University of Georgia, Ph.D., L. M. Conner)	Andy Little
Effects of red-imported fire ants on native vertebrates in the southeastern United States. (University of Florida, Ph.D., L. L. Smith and L. M. Conner)	Andrea Long
Environmental limits on the dispersal of invasive apple snails in Lake Seminole. (University of Georgia, M.S., P. V. McCormick)	Nicholas Marzolf
Patterns of genetic diversity in amphibians across a gradient of landscape and wetland-scale disturbance. (University of Georgia, M.S., L. L. Smith)	Cara McElroy
The role of submerged aquatic vegetation (<i>Hydrilla verticillata</i>) on nutrient dynamics and freshwater aquatic food webs within Lake Seminole. (University of Georgia, Ph.D., S. W. Golladay)	Stephen Shivers
Evaluating macroinvertebrate sensitivities to low-flow in a southwest Georgia stream. (University of Georgia, M.S., P. V. McCormick)	Chelsea Smith
The effect of mesopredator and red imported fire ant exclusion on vertebrate scavenging communities. (University of Georgia, M.S., L. M. Conner)	Kelsey Turner
Water and carbon flux in longleaf pine woodlands. (University of Alabama, Ph.D., L. R. Boring)	Susanne Wiesner
Long-term movement, dispersal and survivorship of gopher tortoises (<i>Gopherus polyphemus</i>) in southern Georgia. (University of Georgia, M.S., L. L. Smith)	Alex Wright

Conservation Interns/Apprentices

John-Michael McCormick. 2013-2014. A.A.S., Fish and Wildlife Management Technology, Haywood Community College.

Matthew Shurley. 2014-present. B.S., Natural Resource Management, Abraham Baldwin Agriculture College.

Joseph Warden. 2013-present. B.S., Wildlife and Fisheries Science at the Tennessee Technological University.

Scientific Advisory Committee

Dr. Robert J. Naiman (1993-present), Chair (2012-present)
 Professor Emeritus
 School of Fisheries
 University of Washington

Dr. Jerry F. Franklin (1988-present), Founding Member
 Professor of Ecosystem Management
 College of Forest Resources
 University of Washington

Mr. Robert Larimore (2010-present)
 Natural Resources Program Manager
 US Army Installation Management Command
 Fort Sam Houston, Texas

Dr. Gene E. Likens (1988-present), Founding Member
 Distinguished Senior Scientist, Ecologist
 Founding Director and President Emeritus
 Cary Institute of Ecosystem Studies

Mr. Brian Richter (2013-present)
 Director, Global Freshwater Initiative
 The Nature Conservancy
 Arlington, Virginia

Dr. Nova J. Silvy (2010-present)
 Regents Professor
 Department of Wildlife and Fisheries Sciences
 Texas A&M University

Dr. Jim Vose (2013-present)
 Research Ecologist and Project Leader
 U.S. Forest Service, Southern Research Station
 Center for Integrated Forest Science

Staff

Scientists

Lindsay R. Boring - Director, Scientist, Forest Ecology
Adjunct Associate Professor - University of Georgia
Courtesy Professor - University of Florida

Steven T. Brantley - Assistant Scientist, Ecohydrology
Adjunct Assistant Professor - University of Georgia

L. Michael Conner - Scientist, Wildlife Ecology
Courtesy Assistant Professor - University of Florida
Affiliate Assistant Professor - Auburn University
Adjunct Assistant Professor - University of Georgia
Adjunct Assistant Professor - Mississippi State University
Adjunct Assistant Professor - University of Tennessee

Stephen W. Golladay - Associate Scientist, Aquatic Ecology
Adjunct Associate Professor - University of Georgia
Adjunct Associate Professor - Valdosta State University

Steven B. Jack - Conservation Ecologist, Applied Forest Scientist
Courtesy Associate Professor - University of Florida
Affiliate Assistant Professor - Auburn University

L. Katherine Kirkman - Scientist, Plant Ecology
Affiliate Professor - Auburn University
Adjunct Professor - University of Georgia
Adjunct Professor - University of Florida

Paul V. McCormick - Scientist, Aquatic Ecology
Adjunct Professor - University of Georgia
Adjunct Professor - Georgia State University

Lora L. Smith - Associate Scientist, Wildlife Ecology
Courtesy Professor - University of Florida
Affiliate Professor - Auburn University
Adjunct Professor - University of Georgia
Adjunct Professor - Texas A&M University
Adjunct Professor - University of Maine

Cherry, Michael J. - Postdoctoral Researcher, Wildlife Ecology

Research Technicians/Associates

Andres Baron - Lead Technician I, Forest Ecology II

Brian A. Clayton - Monitoring Technician II, Groundwater Hydrology

Brian Cloninger - Central Analytical Lab Technician

*Lisa Cowart - Lead Technician I, Aquatic Ecology

Lisa Giencke - Lead Technician I, Plant Ecology

Jennifer L. Howze—Research Associate, Herpetology

*Noah Jansen – Lead Technician II, Forest Ecology

Gail Morris - Lead Technician I, Wildlife Ecology

Mary Frances Nieminen - Lead Research Technician I, Forest Ecology III

Evan Rea - Lead Research Technician I, Aquatic Ecology

Nathalie D. Smith – Lead Technician I, Aquatic Ecology

R. Scott Taylor – Lead Technician II, Forest Ecology

Research Support

Jean C. Brock - Information Technology Manager / Geographic Information Systems

Glenn D. Bailey, Jr. - Network Manager

Bryan Cloninger - Central Laboratory Technician

Micheal G. Simmons – Database / Data Analyst

Chandler “Lain” Alexander - IT and Network Support Technician

Elizabeth P. Cox - Science Librarian

Education

R. Kevin McIntyre - Education Coordinator

D. Woody Hicks - Education / Scientist, Groundwater Hydrology

Jessica D. McCorvey - Education Program Assistant

Mark A. Melvin - Education Technician / Conservation Management

Conservation

James B. Atkinson, Jr. - Natural Resource Manager

T. Scott Smith - Assistant Natural Resource Manager

Steven B. Jack - Conservation Ecologist

Brandon Rutledge - Conservation Biologist

Bobby E. Bass - Conservation Technician II

Mark A. Melvin - Conservation Management / Education Technician

Joel L. Rackley - Agricultural Specialist

David C. Varnadoe - Conservation Horticulturist

Maintenance and Operations

Dennis J. Williams - Maintenance Manager

Administration

Lindsay R. Boring - Director

Becky H. Gay – Business Administrator

Denise R. Rovig - Assistant to the Director

Cindy C. Craft – Administrative and Human Resource Assistant

Robert S. Lynch - Accountant

Rosanne B. Bohannon - Procurement Specialist / Accounting Assistant

Larry E. Ethridge - Security Supervisor

Director's Report to the Trustees of Ichauway, Inc.

April 7, 2015

T. David Green - Security Officer

Jessica A. Hall - Receptionist

*has left the Center

Guest Seminars

Aubrey, Dr. Doug. Assistant Professor of Biology, Georgia Southern University, Statesboro, Georgia. Forest Ecohydrology: Coupled water and carbon cycles.

Bosch, Dr. David. Research Hydraulic Engineer, USDA-ARS, Southeast Watershed Research Lab, Tifton, Georgia. Role of riparian forest in watershed scale hydrologic budget.

Brantley, Dr. Steven. Postdoctoral Researcher, Coweeta Hydrologic Laboratory, Otto, North Carolina. Drivers of change in forest water use in the Southern Appalachian Mountains.

Cohen, Dr. Matthew. Associate Professor, Forest Water Resources, Hydrology, University of Florida, Gainesville, Florida. Algal proliferation in Florida's springs: Rumination on eutrophication in streams and rivers.

Freeman, Dr. Mary. Research Ecologist, USGS, Patuxent Wildlife Research Center, Institute of Ecology, University of Georgia, Athens, Georgia. Approaching ecological flows through community dynamics.

Gawlik, Dr. Dale. Director, Environmental Science Program, Professor of Biological Sciences, Florida Atlantic University, Boca Raton, Florida.

Gonzalez-Benecke, Dr. Carlos. Research Associate in Forest Resources and Conservation, University of Florida, Gainesville, Florida. Using water relations measurements and concepts to understand forest water balance.

Hanula, Dr. James. Research Entomologist, USDA Forest Service, Forestry Sciences Laboratory, Athens, Georgia. Bees and Trees: The effects of forest structure and management on pollinators.

Jacobson, Dr. Harry. Professor Emeritus, Mississippi State University. White-tailed deer research and management: Past, present and future.

King, Rachel. M.S. Student, Odum School of Ecology, University of Georgia, Athens, Georgia. Spatial ecology and wetland use of aquatic turtles in the Coastal Plain of Georgia.

Magoulick, Dr. Daniel. Assistant Unit Leader, U.S. Geological Survey, Research Fish Biologist, Arkansas Cooperative Fish and Wildlife Research Unit and Professor, Department of Biological Sciences, University of Arkansas. Classification of natural flow regimes and flow-ecology relationships in the Ozark-Ouachita Interior Highlands region.

Martin, Zachary. Biologist, U.S. Geologic Survey, Southeast Ecological Science Center, Gainesville, Florida. Revealing patterns in fish diversity: Perspectives from studies in comparative morphology and stream ecology.

Marzolf, Dr. Erich. Director, Water Resources Division, Suwannee River Water Management District, Live Oak, Florida. Water quantity and quality management in the Suwannee River Water Management District, Florida.

McKay, Dr. Kyle. Research Civil Engineer, U.S. Army Corps of Engineers, U.S. Army Engineer Research and Development Center, Athens, Georgia. Informing flow management decisions in the Middle Oconee River, Georgia.

Rains, Dr. Mark. Assistant Professor, School of Geosciences, University of South Florida, Tampa, Florida.

Steinman, Dr. Alan. Director, Annis Water Resources Institute, Professor of Water Resources, Muskegon, Michigan. Watersheds and phosphorus: Degradation, restoration and occasional frustration.

Strickland, Dr. Timothy. USDA, Agricultural Research Service, Southeast Watershed Research, Supervisory Research Soil Scientist, Tifton, Georgia. Introduction to the long-term Agro-ecosystem Research Network: Gulf Atlantic Coastal Plain.

Tank, Dr. Jennifer. Stream Ecology and Biochemistry, Department of Biological Sciences, University of Notre Dame. Pairing in-stream and landscape conservation to reduce stream water nutrients exported from agricultural watersheds.

Ichauway, Inc.

58-1824778

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Cash held for charitable activities

All cash except for a working capital reserve of \$846,993 is used for charitable activities. The organization's annual funding is set at a level equal to budgeted expenses and all assets are used for and are directly related to carrying out the organization's primary charitable purpose. Temporary cash balances are invested short-term; however, other than the working capital reserve, all cash is on hand to fund current charitable activities.